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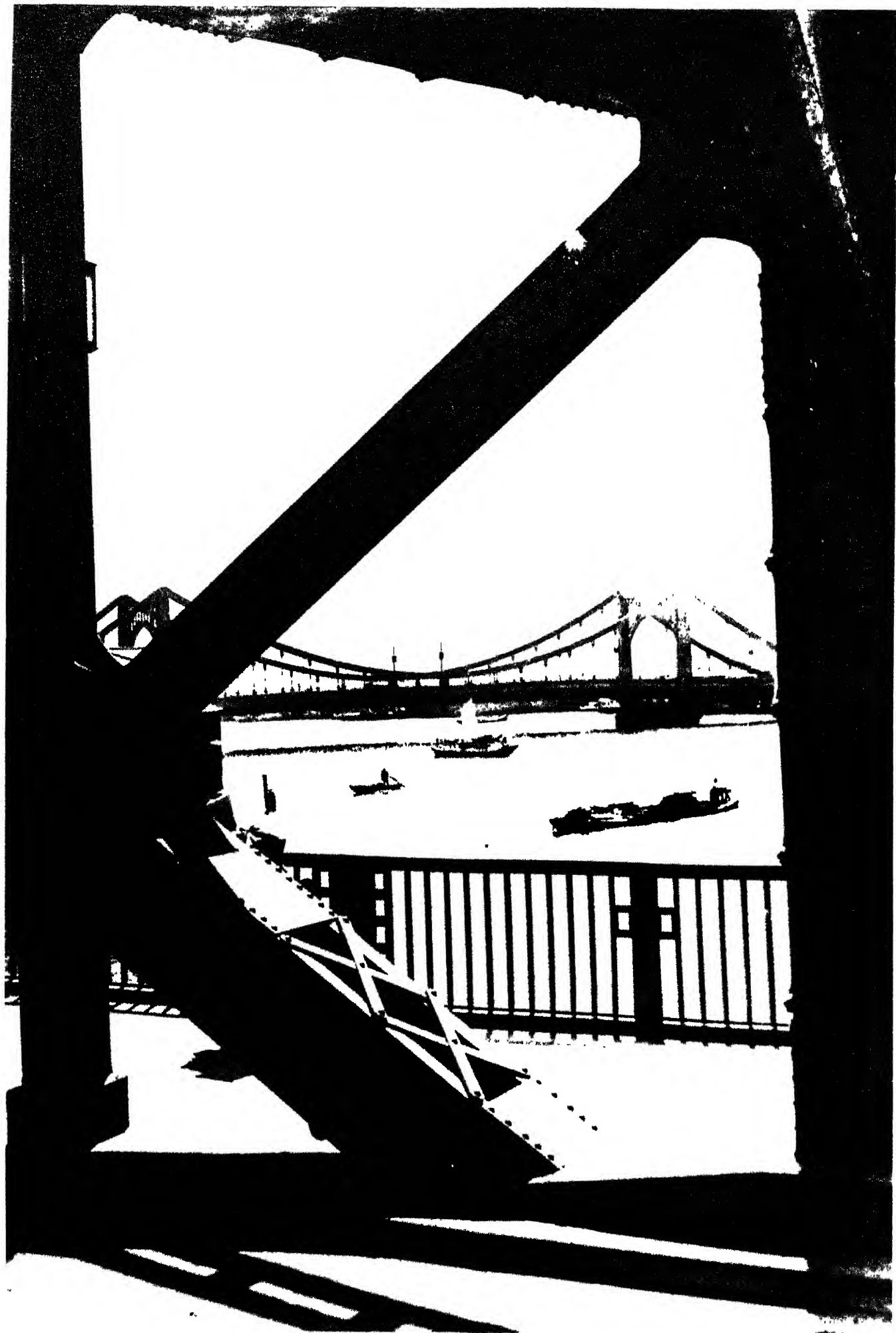












THE  
RECONSTRUCTION  
OF  
TOKYO

Tokyo Municipal Office

1933

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## Imperial Edict on Reconstruction

Emulous of the grand examples set by Our Imperial ancestors and stimulated by the glorious chronicles of Our national progress, We have sincerely hoped to prove a worthy successor in the great task of restoration undertaken by Our august father and have always exerted Our utmost efforts to conduct a successful administration. It is Our great fortune that, through the divine help of Our forefathers and the loyal coöperation of Our people, we have been able to maintain Our national repose and security despite the occurrence of the world war of unexampled dimensions.

Now, without forewarning and suddenly there has occurred the terrible earthquake of September 1. So severe were the vibrations that numberless houses were ruined and tens of thousands of men and women perished. Fires broke out in all directions, the flames and smoke reached to the sky, and Tokyo, Yokohama and other cities and towns were burnt to the ground overnight. All means of communication were obstructed, and wanton rumors widely circulated. The public were alarmed and excited, adding more to a disaster already of appalling magnitude. It is imagined that the catastrophe was even more tragic and ghastly than the historic occurrence of the Ansei era.

Whilst We deplore the happening of such calamity under Our own rule, it is beyond human will or effort to prevent the inexorable convulsions of nature. We consider that the only



course left to Us now is to lose no moment in doing all that is within Our power, and to set at rest the mind of the people. At an extraordinary moment an extraordinary decision is needed. If we cleave fast to the rules and regulations of ordinary times and do not rise to the situation; if we fail correctly to appreciate the relative urgency and importance of needed measures; and if, in an attempt to guarantee the interests of individuals, or groups, the security of the afflicted many is at all menaced—then the sentiments of the people will be agitated to a limitless degree. We entertain deep concern in this regard and have commanded the government officials to devise measures for quick relief, and, by providing for the urgent needs of the people, to bring Our sympathy and love toward them into immediate evidence.

Tokyo, the capital of the Empire, has been looked upon by the people as the centre of political and economic activities and the fountainhead of the cultural advancement of the nation. With the unforeseen visit of the catastrophe, the city has entirely lost its former prosperous contours but retains, nevertheless, its position as the national capital. The remedial work, therefore, ought not to consist merely in the reparation of the quondam metropolis, but, in ample provisions for the future development of the city, completely to transform the avenues and streets. We confidently trust that Our loyal people, who always courageously proffer their services and make sacrifices for the public welfare, ardently desire, with Us, to enjoy the best facilities and security obtainable. We have, therefore, commanded Our prime minister to establish at the earliest moment a special institution for the reconstruction of the capital, and to discuss and study the great project, which, upon

completion, will be submitted to the highest body of advisers and also to the Houses of the law-givers, so that there shall be no miscalculation in the conception and execution.

The government officials are charged, in application of Our sincere purpose, to engage in the prompt relief of the suffering people, and in the strict suppression of wild rumors, so as to inspire security in the public mind. The general nation are ordered to assist in the realization of the government's undertakings and earnestly to fulfil their duty to the public, thereby strengthening the foundations of our Empire.

At this moment of catastrophe unparalleled in history Our stricken heart goes out in abundant compassion to the people. Ye, Our subjects, are commanded to follow Our desire above set forth.

Imperial Sign Manual

Prince Regent's Sign Manual

September 12, 1923.



# His Imperial Majesty's Rescript

GRACIOUSLY ACCORDED TO TOKYO IN HONOR OF COMPLETING  
THE RECONSTRUCTION OF THE CAPITAL

Profoundly impressed with the splendid achievement of completing the reconstruction of the Capital, through the loyal co-operation of officials and citizens, in such a comparatively brief period of time, We hereby express the greatest pleasure and satisfaction.

Yesterday, on a personal tour of inspection through the reconstructed portion of the City, We were rejoiced at the marvellous transformation and restoration everywhere in evidence.

On this happy occasion We express the hope that all Our subjects will continue to unite in heart and mind for even further development of the Capital and its more effective administration.

Tokyo, March 26th, 1930.



# PREFACE

In profound and ever grateful recognition of the boundless generosity and practical sympathy so graciously bestowed upon our citizens and city at the time of the overwhelming earthquake disaster in September, 1923, the Mayor of Tokyo takes the liberty of having the honour to ask your kind acceptance of the volume herewith presented, which gives a full and accurate account of the Reconstruction of Tokyo.

That our great and populous city, in so short a space as seven years, has been raised from a state of ruin and restored to what is, in almost every respect, a new and modern metropolis, in all its appointments and facilities of civilization, is in no small measure due to the generous assistance, both in spirit and in kind, extended by our numerous friends among all the nations of the world. We take this opportunity of cordially acknowledging that this colossal achievement was as much inspired and brought to successful completion through the confidence, benevolence and beneficence accorded us by the Rulers and People of foreign nations, as by the courage, selfsacrifice and public spirit of the Japanese people themselves.

The complicated process of designing and rebuilding, after decimation by earthquake and fire, a great city like our Imperial Capital is beyond the power of words fully to describe; but the present volume will convey some conception, however inadequate, of the unprecedented task attempted, and how far it has been completed.

The volume bears with it, not only the sincere thanks of our City and Nation to numerous and often illustrious benefactors, but it illustrates, we venture to hope, in an illuminating manner the science and art of modern town planning and land readjustment, which may prove interesting and useful to other cities. Thus the book is as much a gesture of gratitude and good will to all the friendly nations and their municipalities, as it is a memorial of our own happy achievement in the final Reconstruction of Tokyo.

MAYOR OF TOKYO

March 31st, 1933.



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## M A P S

Tokyo Before the Earthquake

The Perpendicular Changes of Lands by the Earthquake of 1923 in

Kwanto Districts

Reconstruction Plan of Tokyo



## THE RECONSTRUCTION OF TOKYO

Land Readjustment  
"Zoning System"  
Roads  
Bridges in Tokyo  
Rivers and Canals  
Parks in Tokyo City  
Municipal Primary Schools  
Tokyo Municipal Water Supply System  
Sewerage Systems  
Garbage Disposal Works  
Public Sanitation Works of Tokyo Municipality  
Social Works of Tokyo Municipality  
Tokyo Municipal Markets  
Tokyo Municipal Electric System  
Fire Prevention Zones  
Sectional Diagram of Supply of Sand and Loose Earth for Use in  
Reclaiming Low Lying Swampy Residential Lands  
Burnt Area, Origins and Direction of Fire

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The wide ground in front of the Imperial Palace, with a view of main entrance

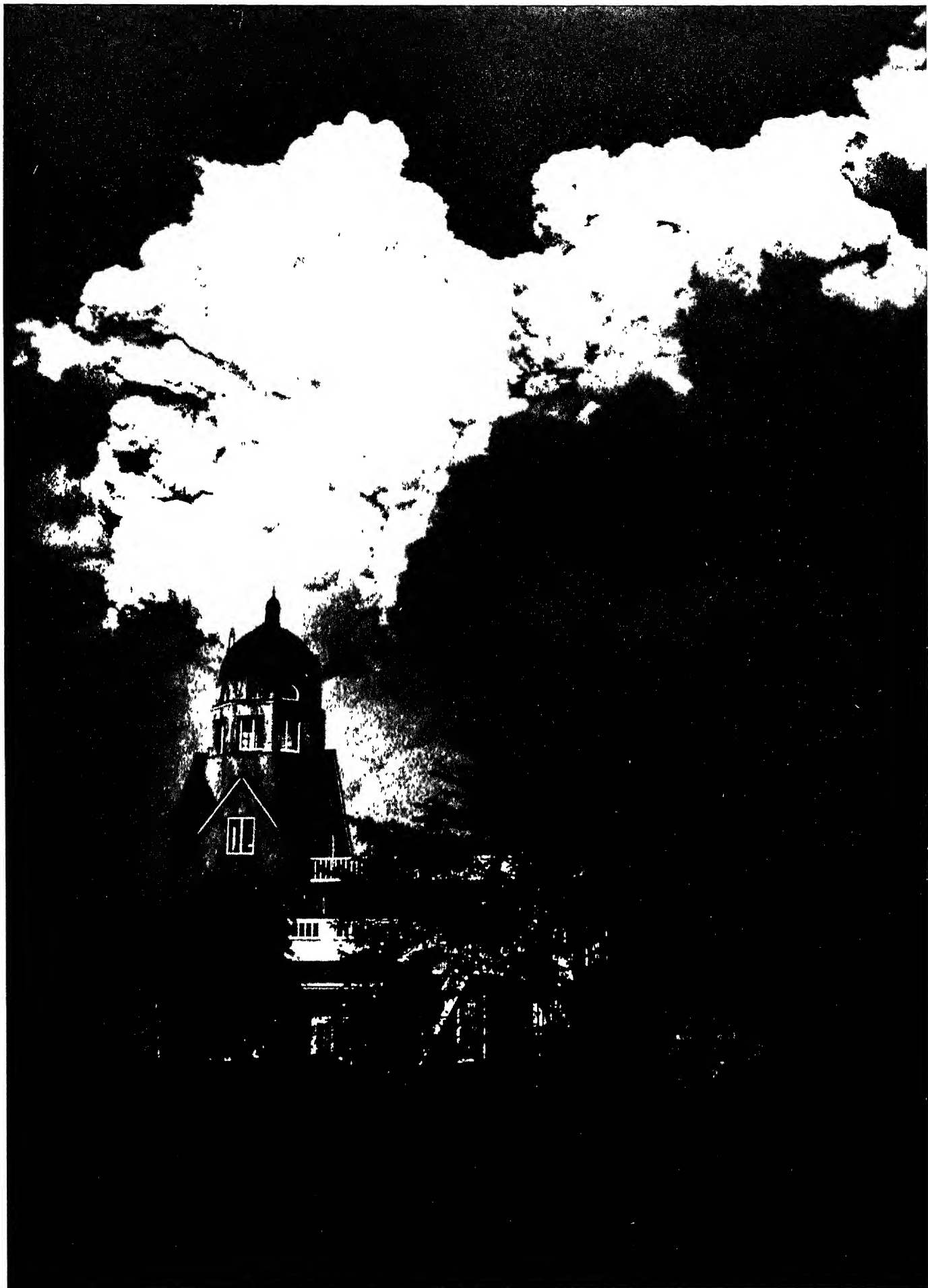


The wide ground in front of the Imperial Palace, with a view of main entrance of the Palace

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BOOK I  
CATASTROPHE





The clouds of conflagration caused by the great Earthquake Fire on the 1st of September, 1923, as seen from Okubo, suburb of Tokyo, at 3 p.m. of the same day





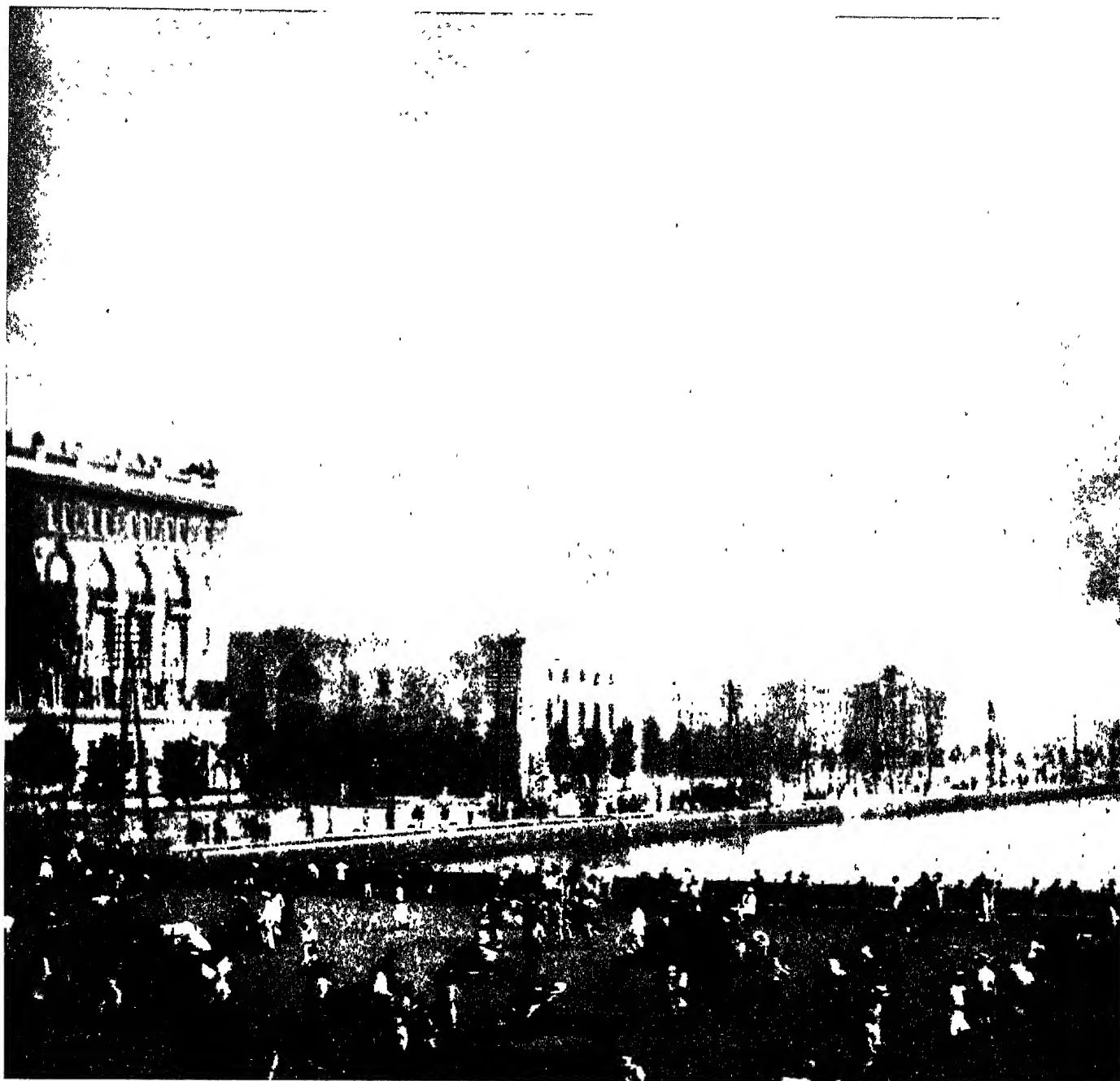
**"Ginza" street boasted as the "Piccadilly" of Tokyo, just two years ago from the earthquake calamity**

#### TOKYO BEFORE THE EARTHQUAKE

Tokyo, the capital of the Empire of Japan, at the head of Tokyo Bay, is situated about centre of the eastern coast of the Main Island, about 19 miles from Yokohama, one of the principal seaports of Japan.

In ancient times Tokyo was called Yedo. When ancient Japanese culture attained its height ten centuries ago in the western cities of Nara and Kyoto, the Musashino Plain, where Yedo was located, was utterly desolate and very sparsely populated. Although down to the beginning of the medieval period, the ground whereon the City now stands was but a remote marshy seashore, it began to grow gradually from a fishing hamlet to a feudal stronghold and then to a castle town, taking full advantage of time and its topographical superiority.

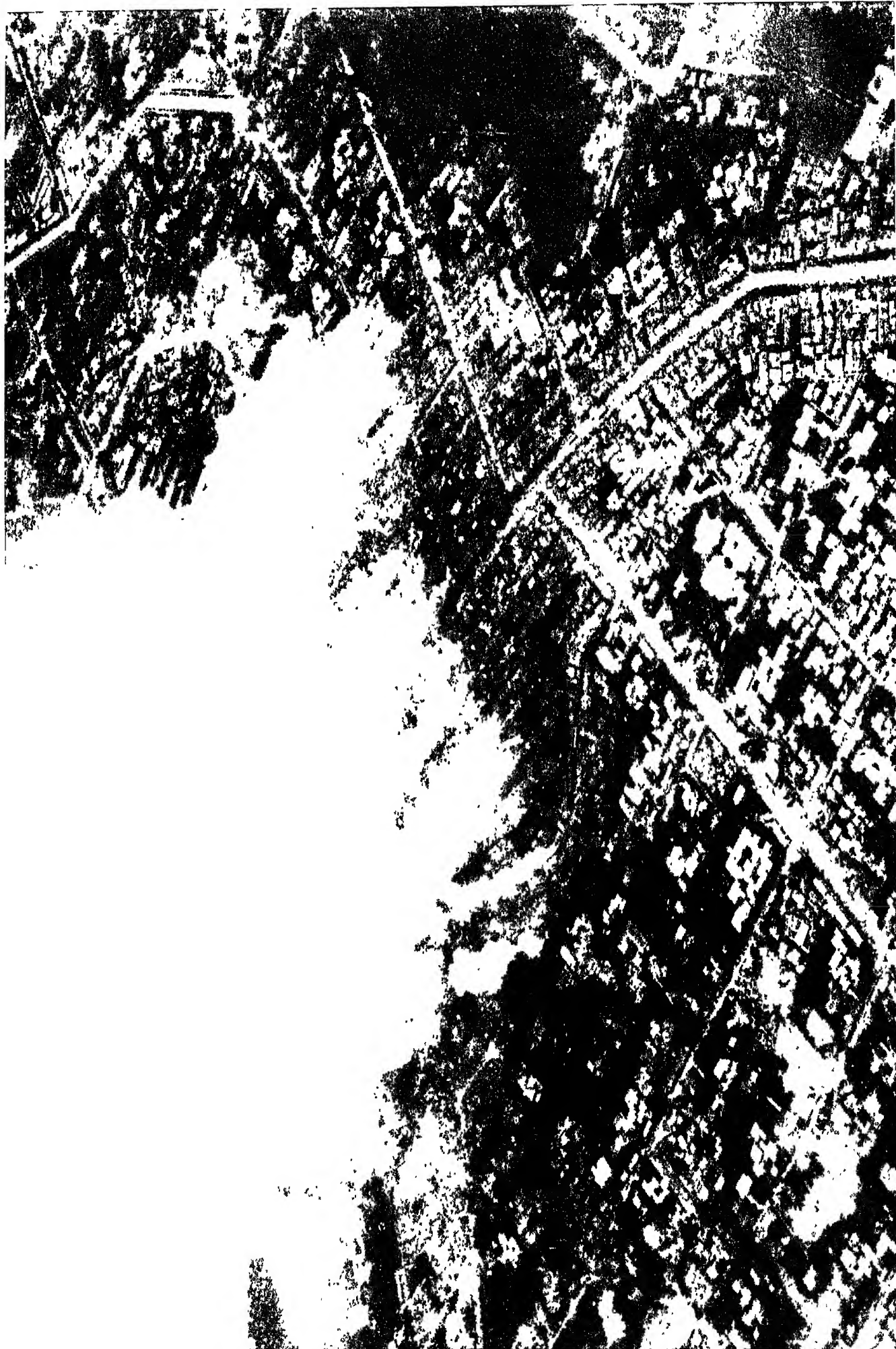
The Imperial Restoration of 1868 opens a new chapter in our history, for that event marks the abolition of the old institutions of feudal days and the birth of New Japan. Yedo had been the seat of the Shogunate for 268 years, that is, throughout the Tokugawa period; but with the Restoration of Imperial



The earthquake fire of "Marunouchi," viewed from the broad street in front of the Imperial Palace, at 1 p.m., on September 1st, 1923

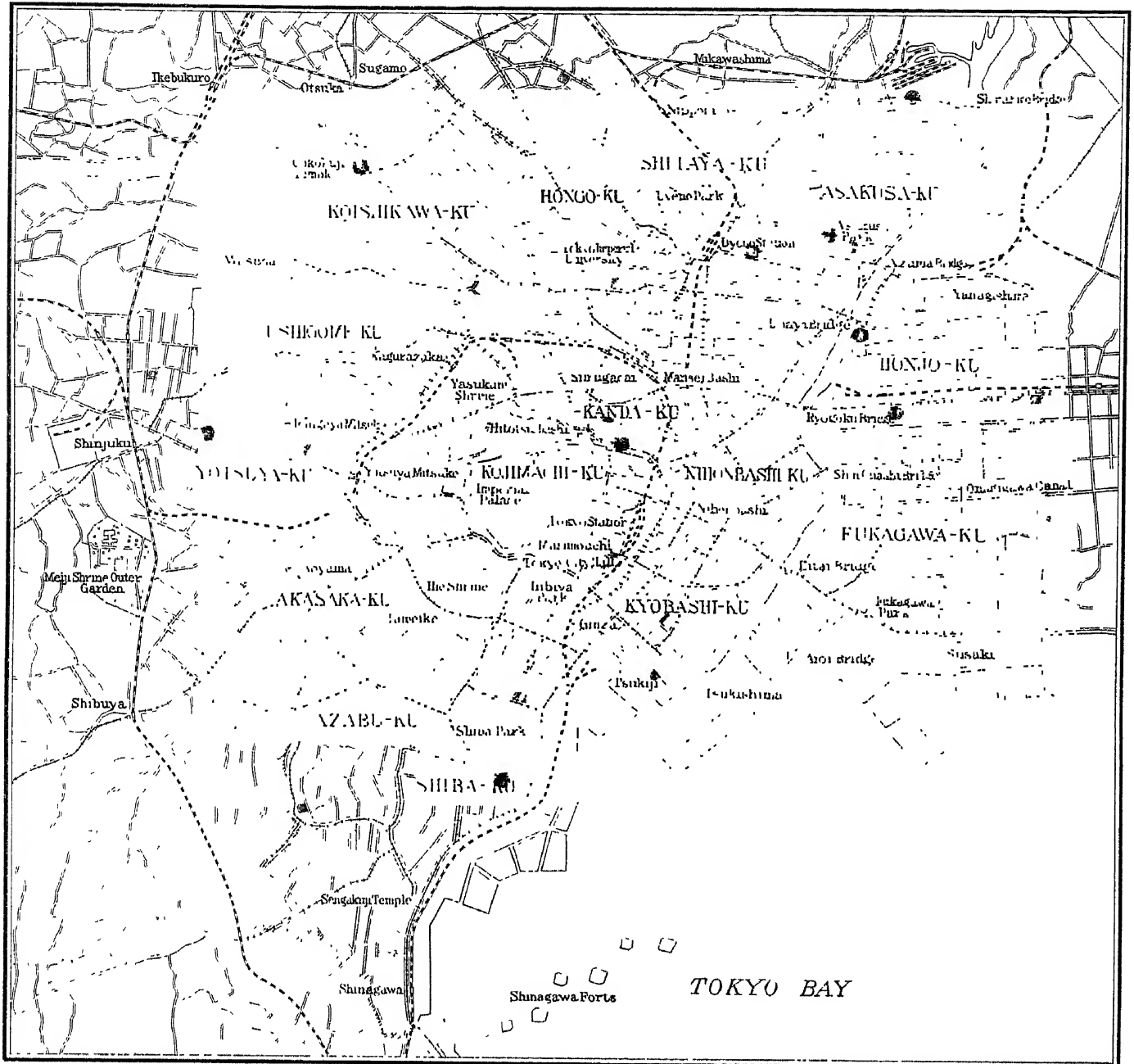
Power the old name of Yedo was changed to that of Tokyo, or Eastern Capital; and it was officially declared the capital of New Japan. Thus Tokyo began new career as the centre of the political, economic and cultural life of the Empire. The city made progress with a rapidity unparalleled in the history of the world. In the space of half a century it emerged from a medieval town into a metropolis fully equipped with the amenities and advantages of modern civilization. Tokyo could then claim to rank among the great cities of the world

But quite unexpectedly the fifty years of Tokyo culture, which had been built up strenuously since the Imperial Restoration, met with a terrible catastrophe on September 1, 1923, when earthquake and fire, unprecedented in history, dealt the city and almost fatal blow. Nearly one half of the entire city was completely reduced to ashes, and the once buisny and prosperous Tokyo changed into a devastated field in a single day. Important financial organs, traffic facilities and means of communication were all destroyed. Uneasiness and confusion filled the city, and the prospects of Tokyo seemed very gloomy for a time.



Airview of the earthquake fire, as seen on the morning of September 3rd, 1923

# TOKYO BEFORE THE EARTHQUAKE



## EXPLANATION

City Hall

Employment Agencies

Ward (ku) Offices

Roads

Municipal Hospitals

Parks



## General Remarks

On September 1, 1923, a slight drizzling rain fell in Tokyo from early morning, due to the influence of a typhoon then heading towards the north-east, across the middle of the mainland of Japan. About nine o'clock, the wind veered towards the south, and then began a stiff southerly gale, soon followed by rain. About 11 o'clock, however, it began to abate, and then gradually to clear up. Only there was a southerly breeze still blowing pretty stiffly, with a velocity of over ten metres a second. At 11.58 a.m., there was felt a weak seismic vibration. Then, almost in a moment, an upheaval, quickly gaining in strength and violence. The unsuspecting populace of the Metropolis all had their breath taken away by sheer surprise as they witnessed, enacted before their eyes the tragic scene of Nature's unbridled fury and ravage, the shaking of houses and the demolition of buildings, the plastering falling out from the walls and the roof-tiles thrown off into the streets. This was the spectacle which met people's eyes in every direction, striking terror into their hearts and rendering them speechless with bewilderment. In an instant, a large number of buildings were leveled with the ground, and thousands of unfortunate people fell victims to the blind fury of the elemental force thus let loose. The seismic centre was situated, as calculated by experts, at the bottom of the sea 90 kilometres to the south of Tokyo, and the greatest breadth of the seismic vibration was 180 kilometres.

As a result of the earthquake, fires broke out at once at several points within the City, caused by the falling of houses and the spontaneous explosion of chemicals. The number of fires is said to have been about 130. Thus the greater portion of the Capital, which had boasted till then of its architectural beauty and the magnificence of its civic life, lay in a miserable destruction; a mere wilderness of smoking embers; and tens of thousands of people lost their lives.

In the long annals of this country, indeed, a catastrophe of like dimensions and disastrous effects has seldom, if ever, been recorded.

# CHAPTER I

## General Description of the Damage Wrought by the Earthquake and Fire

The Great Earthquake of September 1, 1923, of course, cannot, for many reasons, be compared with what are known in the seismic history of this country as "great earthquakes" in the past. Moreover, as the seismic centre was, as stated above, at the sea-bottom remote from the coast, the degree and extent of its disastrous consequences were somewhat mild and mitigated. But as a matter of fact, the actual area which suffered from the earthquake comprised the whole of seven prefectures, that is, Tokyo, Kanagawa, Saitama, Shizuoka, Yamanashi and Chiba as well as Ibaraki. In other words, the total area of land stretching from the central part of the great plain of Kwanto to the Shonan districts and the prosperous coastal regions in the Bo-so peninsula, all suffered from the calamitous effects of the Earthquake. But the worst and the most regrettable result was that nearly one half of Tokyo, the Capital of the Empire, was transformed, in a moment, into a veritable desert of hot ashes and black ruin, as if at the wave of an evil magician's wand. Yokohama, the neighbouring city, one of the most flourishing sea-ports in the Far East, suffered a like fatal blow. Again, the town of Odawara was almost shattered out of existence, while one-eighth of Yokosuka was reduced to ashes. In all, indeed, 381,090 families were literally burnt out of house and home, while 517 families were barely able to escape with only partial damage. In order to enable the reader to visualize the precise extent of the ravage occasioned by the Earthquake, we may say, in terms of money, the total amount of damage recorded is estimated at over 5,506,386,034 yen. It is, therefore, no exaggeration to affirm that, in the whole history of man, never has there been such colossal havoc wrought by a single convulsion of Nature, of such short a duration.

Below are given statistical returns setting forth details, as classified by prefectures, concerning the people, structures, and so on that suffered from the destructive effects of the calamity:



# GENERAL DESCRIPTION OF DAMAGE WROUGHT BY EARTHQUAKE AND FIRE

Prefectures	No. of families at time of Earthquake	No. of families that suffered from Earthquake							
		Entirely burnt out	Partially burnt out	Entirely demolished	Partially demolished	Swept away by tidal wave	Total	Damaged	Grand Total
Tokyo .....	829,900	311,962	366	16,684	20,122	—	349,134	47,985	397,119
Tokyo City	483,000	300,924	239	4,222	6,336	—	311,721	42,732	354,453
Suburban districts ...	349,900	11,038	127	12,462	13,786	—	37,413	5,253	42,666
Kanagawa ...	274,300	68,634	146	46,719	52,859	425	168,783	68,555	237,338
Chiba .....	262,600	478	—	12,894	6,204	84	19,660	7,696	27,356
Saitama.....	244,900	—	—	4,562	4,348	—	8,910	6,451	15,361
Shizuoka .....	289,100	16	5	2,241	5,216	881	8,359	4,581	12,940
Yamanashi ...	117,000	—	—	562	2,217	—	2,779	1,263	4,042
Ibaraki .....	269,700	—	—	157	267	—	424	41	465
Total .....	2,287,500	381,090	517	83,819	91,233	1,390	558,049	136,572	694,621

Prefectures	Actual population on day of Earthquake	Sufferers from Earthquake						
		Killed	Missing	Fatally injured	Slightly injured	Persons whose houses were burnt, demolished, or swept away by water	Persons whose houses were damaged	Total
Tokyo .....	4,050,600	59,593	10,904	8,773	20,199	1,555,778	247,988	1,903,235
Tokyo City	2,265,300	58,104	10,556	7,876	18,392	1,383,849	221,472	1,700,249
Suburban districts ...	1,785,300	1,489	348	897	1,807	171,929	26,516	202,986
Kanagawa ...	1,379,000	29,614	2,245	6,187	13,336	781,492	342,135	1,175,009
Chiba .....	1,347,200	1,373	47	984	1,111	96,620	40,944	141,079
Saitama .....	1,353,800	280	36	207	334	50,312	37,567	88,736
Shizuoka .....	1,626,300	450	42	288	507	46,975	24,551	72,813
Yamanashi ...	602,000	20	—	48	44	14,614	6,678	21,404
Ibaraki .....	1,399,100	14	1	27	29	2,301	250	2,622
Total .....	11,758,000	91,344	13,275	16,514	35,560	2,548,092	700,113	3,404,898

## DAMAGE SUFFERED BY FOREIGNERS RESIDENT IN TOKYO

The details concerning foreigners resident in Tokyo whose houses were burnt down or otherwise damaged in consequence of the Earthquake, or who lost their lives either directly through the agency of the Earthquake or in the flames



## THE RECONSTRUCTION OF TOKYO

consequent thereto, are as follows: (1) Houses wholly burnt down, 284; shaken down, 16; demolished, 11, making a total of 311. (2) Sufferers from the effects of the disaster were 1,700 in all: among whom were one Englishman, one male American and three male Chinese. And persons who were perished in the flames numbered 4, that is two male and two female Chinese. Those who escaped only with slight injuries, totalled 13, all male Chinese.

Below is given a table showing particulars concerning the damage caused to houses and other structures, throughout the districts under the jurisdiction of the Prefecture of Tokyo:

Tokyo Prefecture	Harbours and Rivers	Roads and Ways	Bridges	Public Parks	Water and Sewerage Systems	Shipping	Electric Enterprises	Structures	Factories and Machinery (included in the figures for Tokyo-Pref.)	Others	Total Value of Damage
Suburban districts ..	<i>spots</i> 195	<i>spots</i> 532	142	—	—	—	—	71,268	—	—	¥ 114,905,580
Tokyo City .....	36	<i>sq. m.</i> 36,89.256	362	21	*	2,270	*	225,155	*	*	3,662,933,859

\* Showed in money on the next table.

Details of the economic losses within the jurisdiction of Tokyo City, are as follows:

Rivers and harbours .....	¥ 1,132,472
Roads and ways .....	2,017,450
Bridges .....	7,747,930
Public parks .....	730,687
Water supply .....	10,128,814*
Sewerage system .....	1,172,410*
Shipping .....	8,065,000
Electric enterprises .....	39,237,688*
Structures .....	1,112,112,623
Factory and machinery .....	164,320,034*
Others .....	2,316,268,751*
Merchandise .....	1,601,300,634
Household goods, etc. ....	627,628,560
Goods in warehouses .....	87,339,557
Total .....	¥3,662,933,859

In Tokyo City embankments of rivers were damaged at thirty-two places

the entire length of which was nearly 1,818.18 metres, while damage to wooden fences, railings, and so on, occurred at fourteen places, with an entire length of 3,616.36 metres. On the other hand, the value of the machinery damaged or destroyed amounted to 8,200 yen, while the damage caused to structures and buildings is estimated at 1,124,272 yen.

Again, the damage to roads and ways was almost universal, both in and out of the City, so much so, indeed, that we may safely say that none were found in tact after the Earthquake, fissures and cracks being discernible on almost all roads, running in every direction. Moreover, the macadamized ways and concrete-paved roads all suffered from the scorching effects of the flames, and their surfaces were, in all cases, dissolved away. The wooden-paved roads fared worst, as most of them were burnt away and rendered completely useless. Indeed, the damage under this head alone reached, in value, 173,300 yen. When we add to these figures the damage caused to various other kinds of paved ways and streets, their appendages and fixtures, and so on, the figures will swell to 2,017,450 yen.

Again, the number of bridges damaged or demolished by the Earthquake and Fire, was 362 in all. Of the number, 11 iron bridges and 281 wooden bridges were consumed by the flames; the entire surface of which is computed at 42,727.27 square metres. The total damage under this head is calculated at 7,114,960 yen, which represents more than ninety percent of the entire damage caused to bridges within the Capital. Besides, 70 bridges suffered more or less injury, the entire surface of which is estimated at 28,793.38 square metres; and the value at 620,500 yen. These figures have to be further increased by 12,470 yen, the value of the damage to the illuminating appliances for the bridges.

The injury suffered by the City Water Supply was, of course, considerable. The aquaduct or water course between the water watching station at Wadabori, in the south-western suburb of Tokyo, and the water reservoirs at Yodobashi at the western entrance to the City, collapsed for a distance of 18.18 metres, at two different places. Besides, crevices and clefts were caused at more than 200 various places. Moreover, the pumping appliances installed in the Yodobashi reservoirs were mostly destroyed or thrown out of gear. Within the City, the water mains were seriously dislocated, so much so, indeed that the supply of water practically ceased. Only the Marunouchi district, with Babasaki as the centre, was lucky enough to escape a water famine. All other places, however, were completely cut off from the supply of water.

Further, the bridges supporting the water pipes across rivers and canals also suffered to some extent; in Fukagawa ward, 66 such bridges were burnt;

in Honjo and Nihonbashi wards 13 and 3 respectively; while in Kanda and Kyobashi wards 3 and 1 respectively, making a total of 86. Compared with these figures, however, the number (155,103) of water-taps destroyed by the fire is astonishingly large, which means roughly 64 percent of 241,475, the total number of water-taps registered immediately prior to the Earthquake. The total value of the damage suffered in this respect is roughly estimated at 10,128,814 yen.

Next, comes the damage caused to the City sewerage system. Fortunately, however, the sewerage system of the City was, at the moment of the Earthquake, still in course of construction; and, moreover, it was limited to the Shitaya and Asakusa directions. Therefore, the effects of the Earthquake were not so destructive as in the case of the City Water Supply. Yet, the damage to machinery, various appliances and structures, equaled 972,410 yen, to which, however, must be added a sum of 200,000 yen, the extent of the injuries to the old sewerage system already in existence.

Nor did escape shipping unscathed. According to the returns both of the Metropolitan Police and the Water Police, the total number of boats and vessels which happened to be lying, at the moment, moored in the rivers and canals of Tokyo prefecture and along the shores of the Bay of Tokyo, was put at 2,270, the value of which is estimated to be 8,065,000 yen.

Next comes the damage to electrical enterprises. In the first place, the electric tramway system within the City was deranged and interrupted instantaneously on the occurrence of the Earthquake. The cars, all cut off from supply of motive power, were brought to a standstill at the places where they happened to be. Soon they were enveloped by the on-rushing billows of fiery seas, and quickly reduced to skeletons of iron entangled in entwining wires. Thus 824 cars were burnt either wholly or partially. Beside, the damage to machinery, instruments and appliances installed at the different generating and transforming stations, as well as to the various materials and the electric routes, the electric light fixtures at customers' houses, and buildings in the areas of electric distribution, pertaining to the Electric Light Bureau of the Municipal Electric Department and to the Tokyo Electric Light Co., Ltd., were unprecedentedly great, the damage reaching 39,237,688 yen in value.

As to the damage suffered by houses and buildings, within the City of Tokyo, in all, as many as 225,155 buildings affected to a greater or lesser extent, it reached 18,162,654.54 square metres in the area of sites, in which the houses burnt to ashes numbered to 218,966 and the whole surface occupied by them, the area of the grounds on which they stood as well as the entire floor surface within the structures, aggregated 17,625,748.75 square metres, the



Nihon-bashi, the most favorite bridge to the people of Tokyo from olden times, taken  
the earthquake before



The Nihon-bashi Bridge and its neighbour, just after the disaster



Centre of commerce in the Capital, destroyed by the Earthquake and Fire

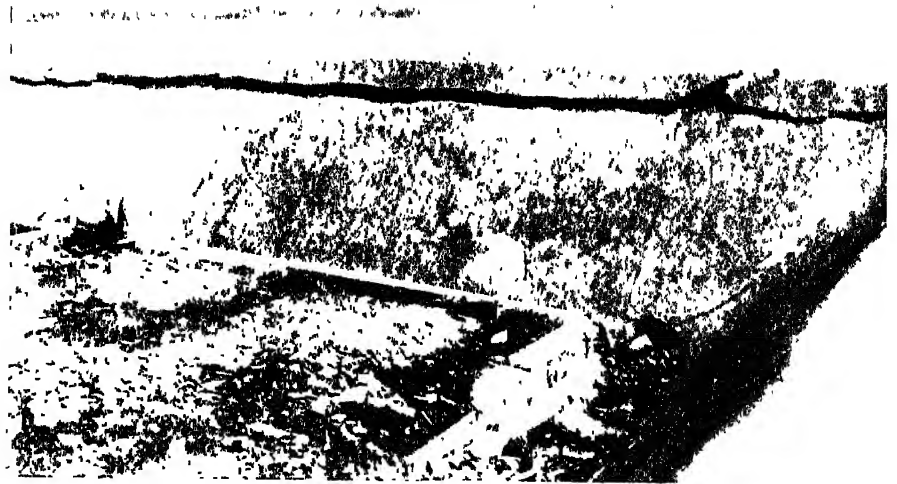


Earthquake fissures on the road

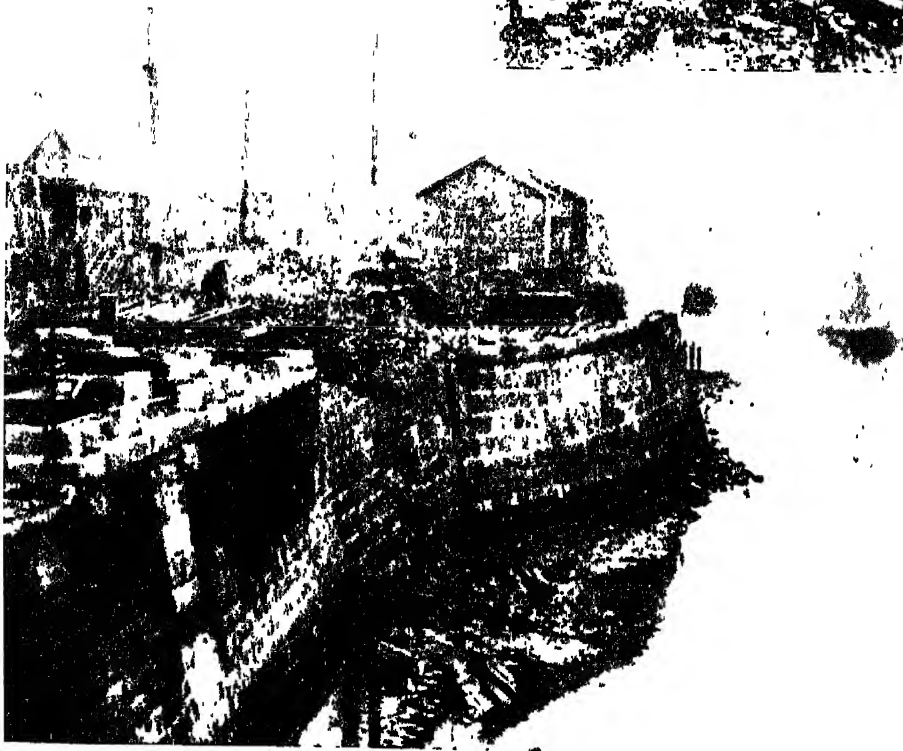




The track of municipal electric tramway, damaged by the earthquake



Fissures to the mole of Susaki



River embankments of Kyobashi  
damaged



Destroyed wooden bridge in Fukagawa  
Actual scene of destruction by the Earthquake

# GENERAL DESCRIPTION OF DAMAGE WROUGHT BY EARTHQUAKE AND FIRE

figures corresponding nearly to 61 percent of the whole area and the entire floor surface of the houses and structures within the City in Pre-Earthquake days. Besides, there were 1,591 houses entirely demolished and 1,612 partially shaken down, while the houses seriously damaged numbered 2,986 in all. Altogether, the area of the sites they covered and the floor surface they contained, reached, in aggregate, 536,905.78 square metres.

If we calculate the value of actual damage to houses and buildings on the basis of 500 yen per *tsubo* (3.31 square metres) for Japanese-style godowns; 300 yen for stone or brick-buildings; 380 yen for ferro-concrete structures; 180 yen for wooden buildings (except for buildings in Kojimachi, Kanda, Nihonbashi, Kyobashi, Shiba, Azabu and Akasaka wards, where we may make it 150 yen, and also for Yotsuya, Ushigome, Koishikawa, Hongo, Shitaya, Asakusa, Honjo and Fukagawa wards, where it may be made 200 yen; and for all buildings of various other descriptions, the same per *tsubo* rate of 200 yen may be made applicable); and also on the basis that in respect to buildings wholly burnt or shaken down, the full value of the actual damage, while for houses only partially consumed or crushed 60 percent and for structures seriously demolished 30 percent, are to be taken respectively as the factors in effecting the calculation, — then we get, in fact 1,112,112,623 yen representing a loss only second in magnitude to that for merchandize and commercial goods.

TABLE OF BUILDING LOSSES

Kinds of structure	Kinds of damage								
	Burnt down			Wholly demolished			Partially demolished		
	No. of build-ings	Sq. m.	Value	No. of build-ings	Sq. m.	Value	No. of build-ing	Sq. m.	Value
Godowns .....	17,890	895,712.39	135,476,500 <sup>yen</sup>	27	3,100.82	469,000 <sup>yen</sup>	27	1,457.85	132,300 <sup>yen</sup>
Stone buildings ...	1,251	125,097.52	13,244,700	15	872.72	92,400	16	1,904.13	120,960
Brick buildings ...	5,296	1,165,993.38	123,449,550	58	14,145.45	1,497,650	68	14,429.75	916,650
Ferro-concrete structures .....	200	221,100.82	25,415,540	3	1,890.90	217,360	7	4,198.34	289,560
Wooden buildings ..	194,098	15,132,885.94	787,726,120	1,488	122,300.82	6,448,050	1,494	112,234.71	3,488,436
Others .....	231	84,958.67	7,710,000	—	—	—	—	—	—
Total .....	218,966	17,625,748.72	1,093,022,410	1,591	142,310.71	8,724,460	1,612	134,224.78	4,947,906



# THE RECONSTRUCTION OF TOKYO

Seriously damaged			Total		
No. of buildings	Sq. m.	Value	No. of buildings	Sq. m.	Value
194	9,441.32	428,400 <sup>yen</sup>	18,138	909,712.39	136,506,200 <sup>yen</sup>
26	2,813.22	89,355	1,308	130,687.60	13,547,415
259	44,948.76	1,427,685	5,681	1,239,567.35	127,291,535
20	15,867.76	547,200	230	243,657.85	26,169,660
2,487	187,299.17	2,925,207	199,567	15,554,720.65	800,587,813
—	—	—	231	84,958.67	7,710,000
2,986	260,370.23	5,417,847	225,155	18,162,654.51	1,112,112,623

TABLE SHOWING DAMAGE TO VARIOUS BUILDINGS CLASSIFIED  
ACCORDING TO KINDS

Kinds of buildings	Wholly burnt down		Partially consumed		Wholly demolished		Partially shaken down		Total	
	no.	sq. m.	no.	sq. m.	no.	sq. m.	no.	sq. m.	no.	sq. m.
Residences .....	184,103	13,017,867.76	49	3,576.85	2,231	162,644.62	2,351	153,950.41	188,734	13,338,039.64
Government and other public offices .....	2,915	713,672.72	—	—	49	1,282.64	6	2,667.76	2,970	717,623.12
Government and other public buildings .....	562	56,204.95	—	—	15	1,484.29	16	1,685.95	593	59,375.19
Schools and libraries .....	1,386	466,704.13	4	2,181.81	34	11,580.16	47	24,446.11	1,471	504,932.21
Shrines, temples and churches..	2,365	238,039.66	—	—	65	9,566.94	57	7,900.82	2,487	255,507.42
Banks and companies ...	4,470	829,834.71	12	8,271.07	51	19,385.12	49	14,902.47	4,582	872,393.37
Factories and warehouses' ...	18,364	1,841,623.13	28	13,550.41	205	28,499.17	292	26,264.46	18,889	1,909,937.17
Theatres and places of amusement ...	248	100,459.50	—	—	7	1,596.69	8	1,533.88	263	103,590.07
Others .....	4,488	280,723.96	—	—	48	6,809.91	42	5,960.33	4,578	293,494.20
Total .....	218,901	17,545,130.52	93	27,580.14	2,705	242,849.54	2,868	239,332.19	224,567	18,054,892.39

The Government and other public offices and buildings given in the preceding table mean those of the Finance, Home, Education, Commerce and Agriculture, Communications and Railway Departments; the Patent Office,

# GENERAL DESCRIPTION OF DAMAGE WROUGHT BY EARTHQUAKE AND FIRE

the Printing Bureau, the Central Telegraph Office, the Board of Audit, the Army Arsenal, the Tobacco Monopoly Bureau, the Kanda, Shitaya, Naniwa, Kyobashi, Ginza, and Shiba Branch Telephone Exchange Offices; the Metropolitan Police Board, the Railway Hospital; the Ueno, Shimbashi, Manseibashi, and Iidamachi Railway Stations. Besides these officials and public buildings and structures, there were the buildings of the American Embassy, the Chinese Legation and Consulate-General, and the Brazilian Embassy, all of which fell victims to the ravages of the Earthquake and Conflagration. Besides these, there were buildings of a similar nature which suffered more or less severely. (For damage suffered by structures and buildings under the jurisdiction of the Imperial Household Department, see Chapter III) As to the structures appertaining to the Municipality of Tokyo, the following table will show the details of damage:

1.	Offices and buildings of the Ward			
	Office (wholly burnt) . . . . .	Kojimachi	Nearly	1,497.52 sq. m.
2.	” ” . . . . .	Kanda	”	1,540.49
3.	” ” . . . . .	Nihonbashi	”	2,029.75
4.	” ” . . . . .	Kyobashi	”	1,447.93
5.	” ” . . . . .	Shiba	”	2,618.18
6.	” ” . . . . .	Ushigome	”	1,008.26
		(demolished)		
7.	Offices and buildings of the Ward			
	Office (wholly consumed) . . . . .	Shitaya	”	2,036.36
8.	” ” . . . . .	Honjo	”	2,710.74
9.	” ” . . . . .	Fukagawa	”	2,310.74
10.	Head Office of the Electric Department, Tokyo City (wholly consumed) . . . . .		”	8,238.01

Besides these, there are found, on the list, as wholly destroyed by the flames, the Fukagawa public library, the Charity Hospital, the Tsukishima Iron Pipe Main Factory, the Honjo Hospital, and many other buildings, altogether numbering 58.

The number of primary schools consumed within the City of Tokyo, was 117, corresponding to 60 percent of the total number of schools of the same kind in the City. All other elementary schools escaped with more or less damage. The number of children attending schools burnt down, was 145,998, which is 61 percent of all the children; that is, 239,087, as registered at all the primary schools throughout Tokyo City.

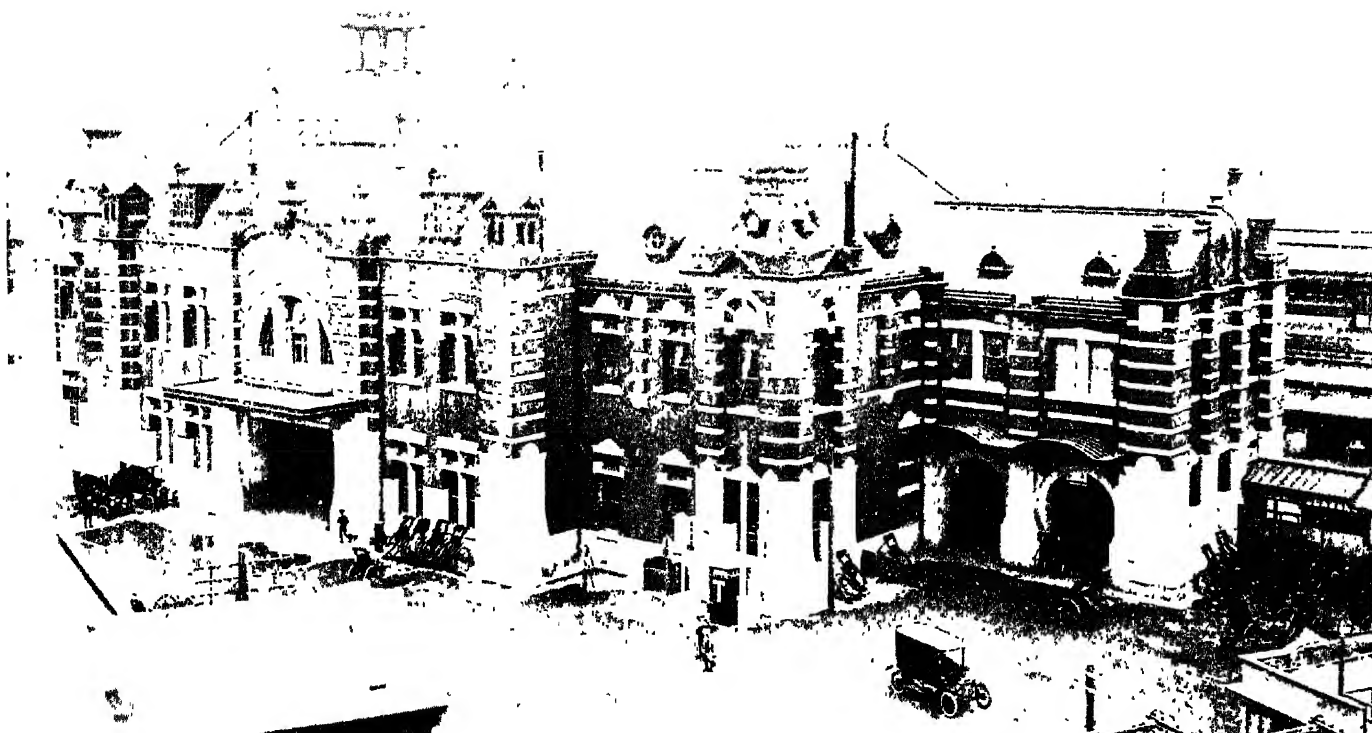
Further, among middle and higher-grade schools of various descriptions existing within the City, there were some which similarly suffered from the effects of the Earthquake: 13 girls' schools, both public and private, with 7,522 pupils; and 13 business schools, with 3,748 pupils, were destroyed. Besides, ten higher technical schools, with 1,882 students; and 13 colleges or universities, with 7,688 students, shared the same fate.

Again, of the municipal public libraries, 12 were reduced to ashes, together with 101,913 books contained in them. These figures, however are further swelled by 16 public libraries of various kinds, which were all destroyed by the flames, together with over 1,070,000 precious volumes.

Nor did Shinto Shrines and Buddhist temples escape, as 151 shrines were burnt down, and 2 others partially destroyed; while 633 Buddhist temples were wholly consumed by fire, 29 partially burnt, 13 completely crushed and 76 partially shaken down. As to Christian Churches, there were 202 burnt down and 4 partially demolished. Among the sacred structures burnt down, there were some of historic fame and ancient renown; for instance, the Daijin-gu Shrine, at Hibiya; the Kanda Myojin Shrine; the Hachiman Shrine at Fukagawa; both the Higashi and the Nishi Honganji temples; and the Eko-in temple at Ryogoku, all noted for historical associations or otherwise. As to hospitals, 162 of various kinds, private, public and Government, were entirely burnt down.

Of companies and commercial corporations which had head offices in the City, 2,589 were completely destroyed by the fire, the companies representing in aggregate paid-up capital of 2,238,650,000 yen. The companies which fared worst were commercial and industrial, the former of which numbered 1,266 and the latter 958. The Tokyo Electric Light Company suffered a loss of 20,646,000 yen, followed by the Fuji Cotton Spinning Mill, with a damage value of 13,345,000 yen. And the total value of the damage suffered by all these companies put together is said to have footed up nearly 174,000,000 yen, compiled according to figures registered. And these big figures correspond to 12.4 percent of the total paid-up capital of those companies. From this description of the damage and losses sustained by business concerns in the City, one will be able to form some idea of the magnitude of the effect of the Earthquake on the business world of this country.

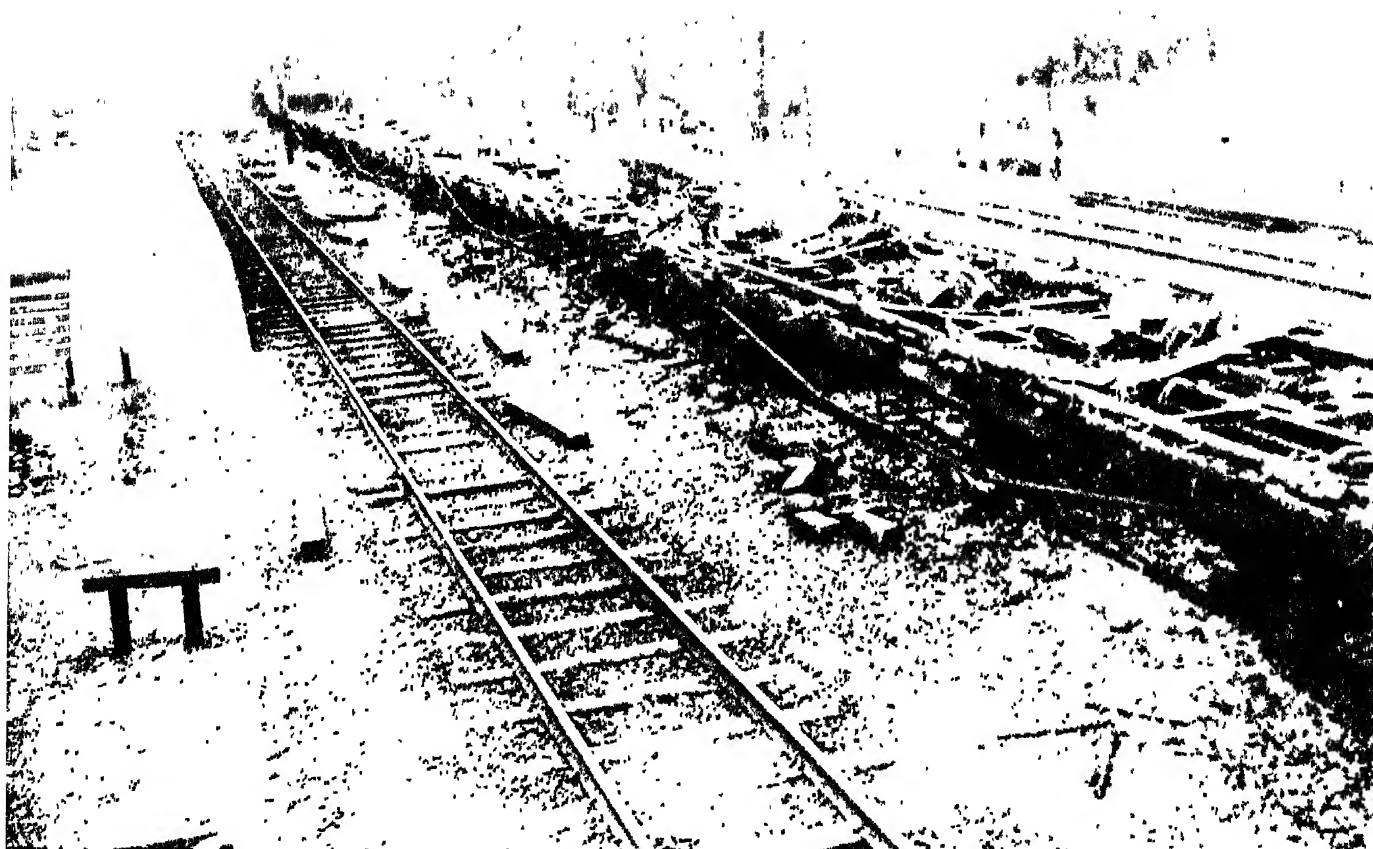
There were at the time in the City 138 banks with 310 branch offices, of which 121 head offices and 222 branch offices were consumed by the fire. The Bank of Japan and 76 banks, out of the 84 associated banks of Tokyo, suffered destruction by the fire. It was something of a miracle that the Japan Hypothetic Bank, the Japan Industrial Bank, the Mitsubishi, Koike, Kojimachi,



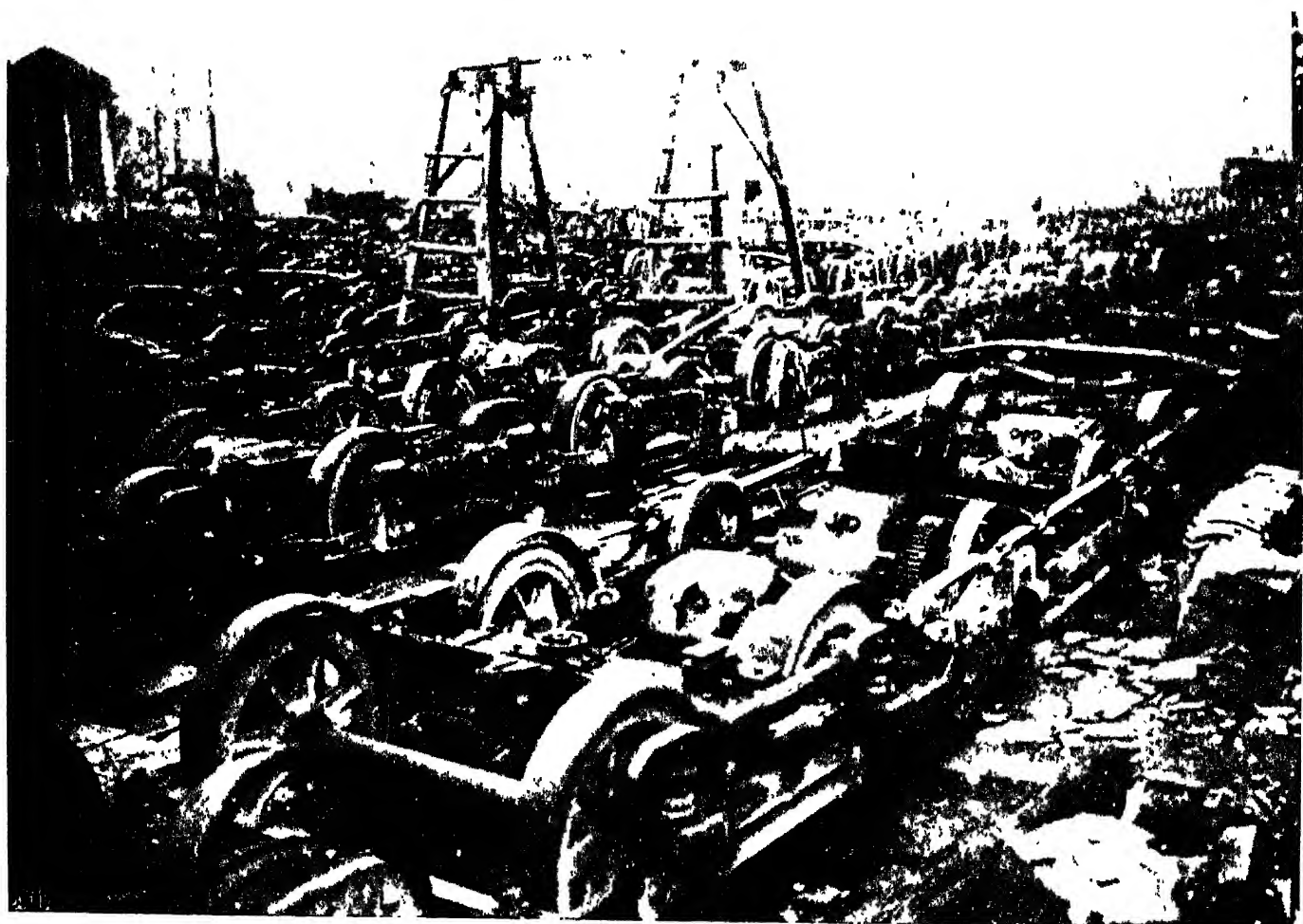
Shimbashi Station in perfect face before the earthquake



Changed scene of the Shimbashi Station after the disaster



Skeletons of the express train, burnt on the way of its errand



Skeletons of the municipal tramway cars burnt

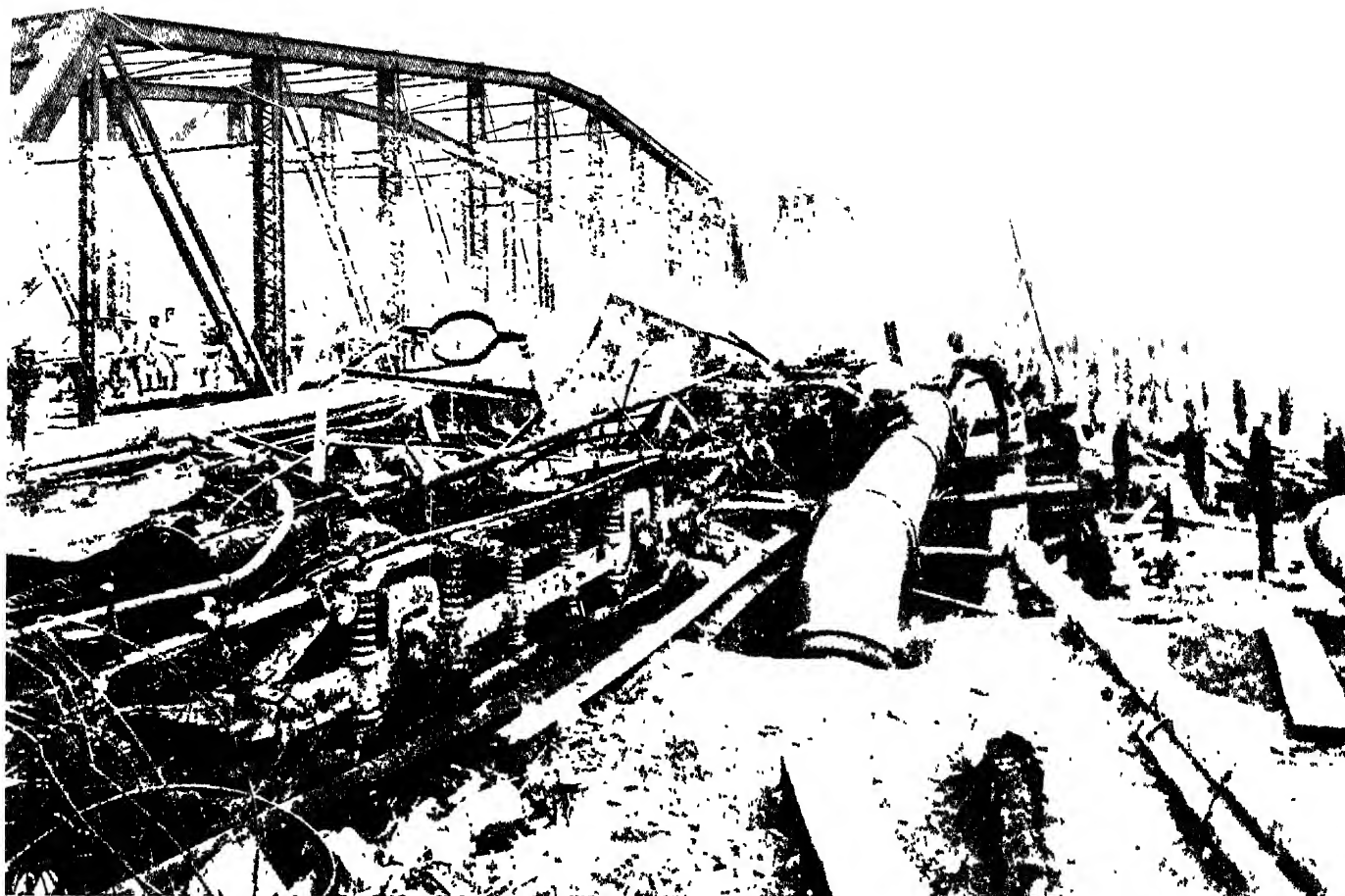




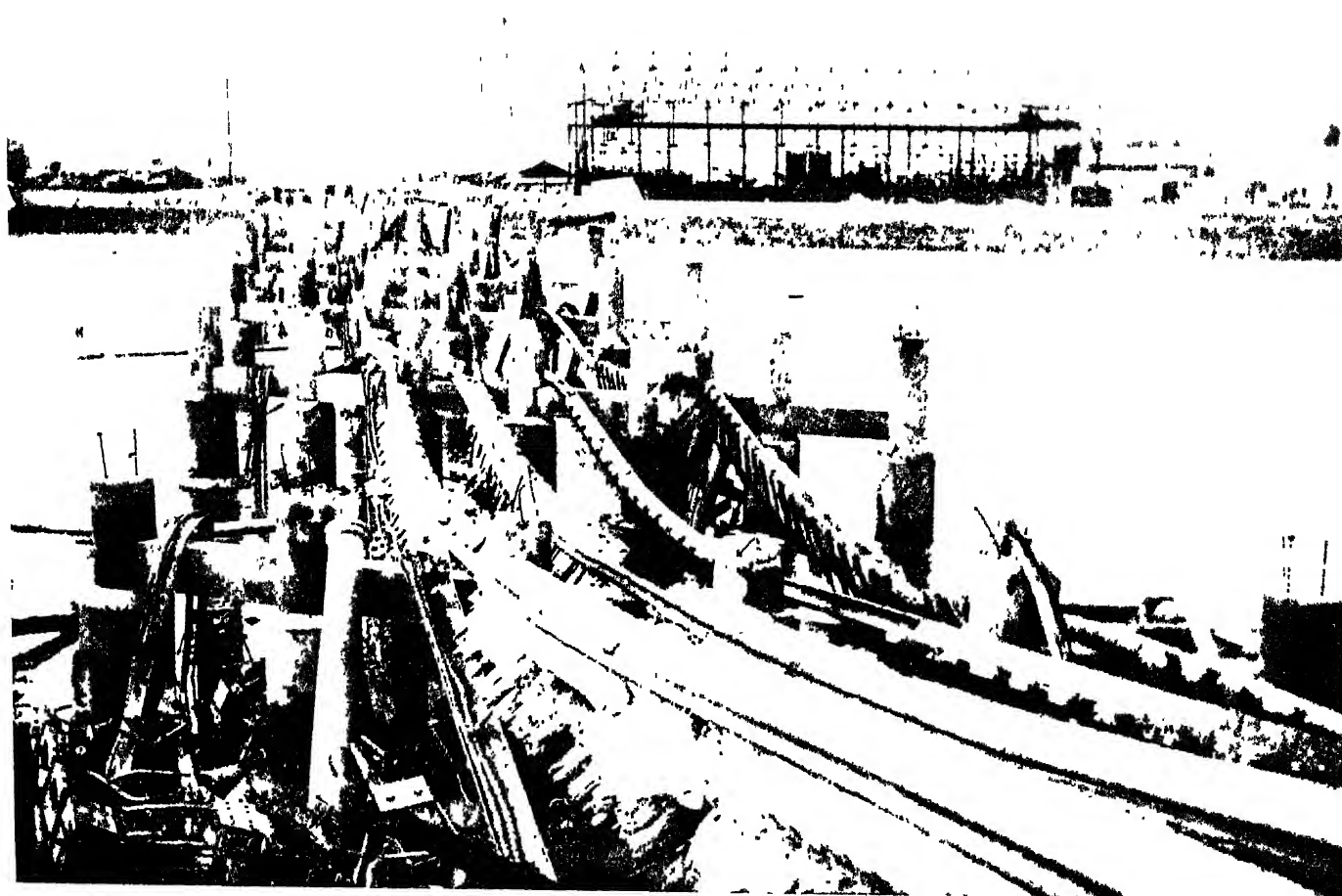
A typical scene of destruction on Japanese wooden houses



"Ishi-doro," the stone-made lump-stand in a temple ground, tumbled and destroyed



Eitai-bashi Bridge burnt in the earthquake fire



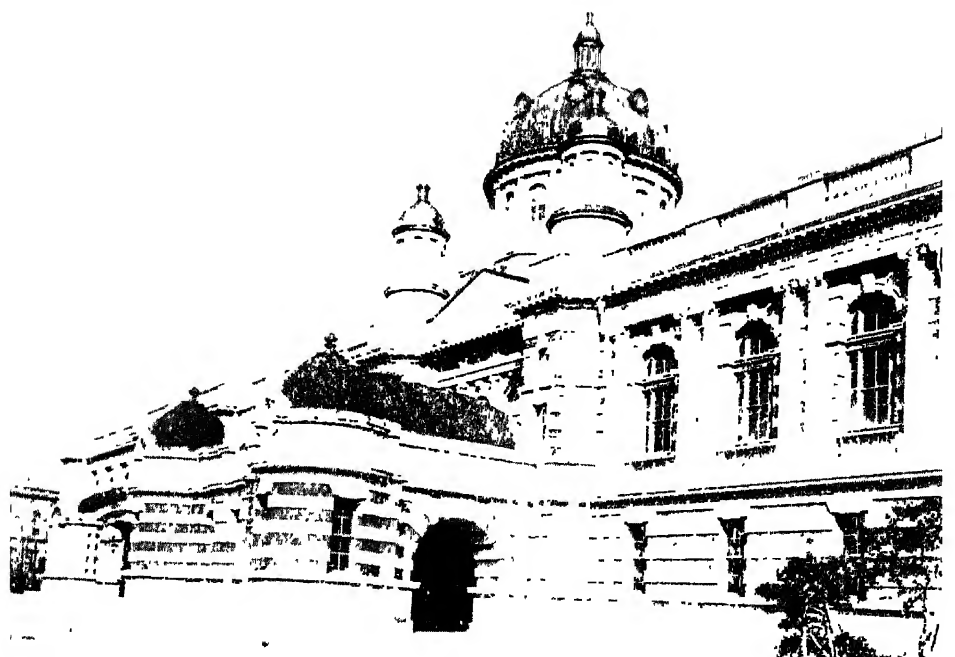
Aioi-bashi Bridge spaned on the mouth of Sumida River, destroyed entirely



Foreign Office



Education Department



Communication Department

The buildings of Government Department before the disaster

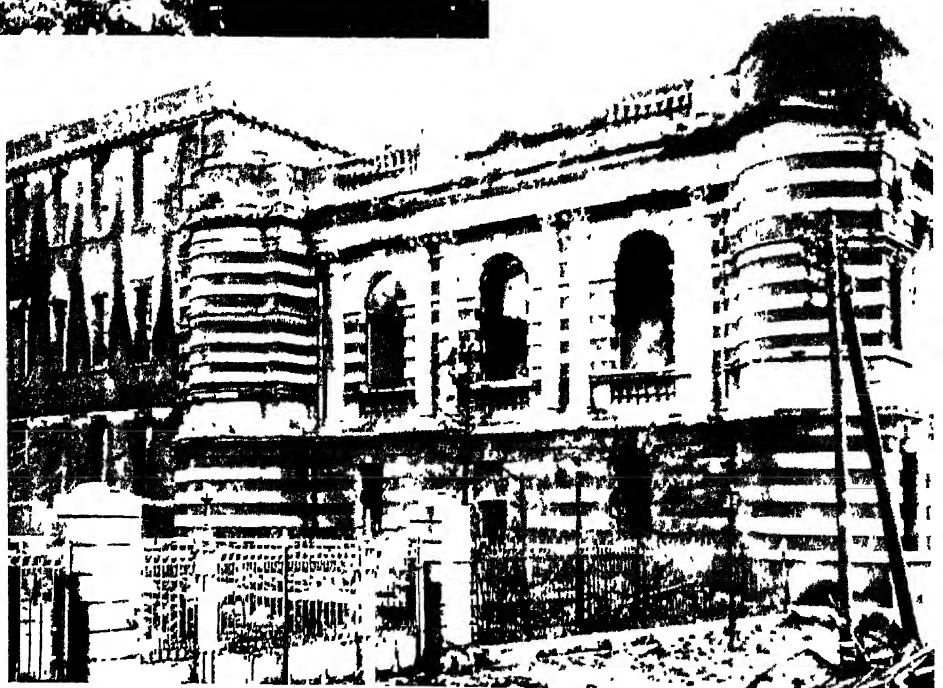




Education Department

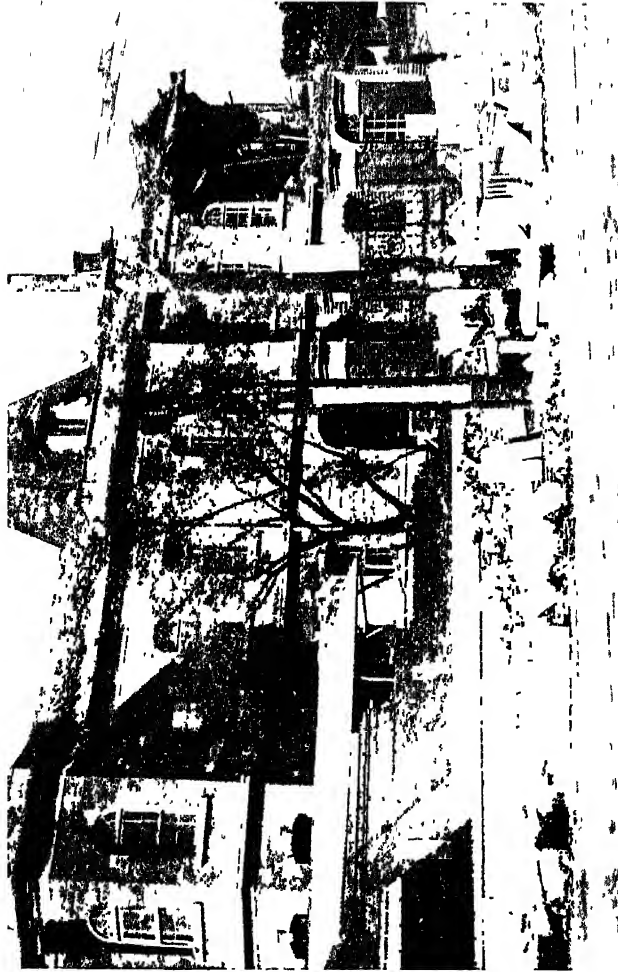


Railway Department

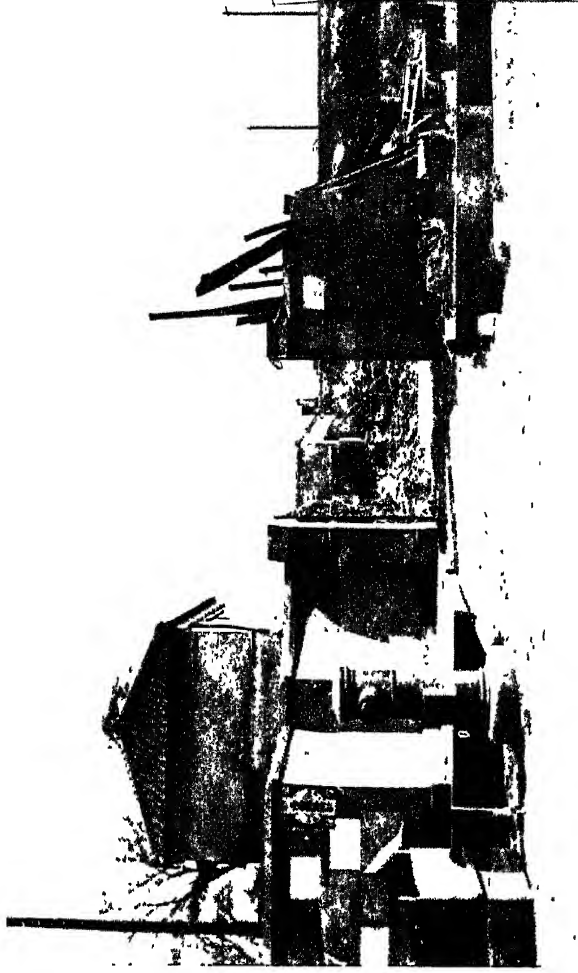


Communication Department

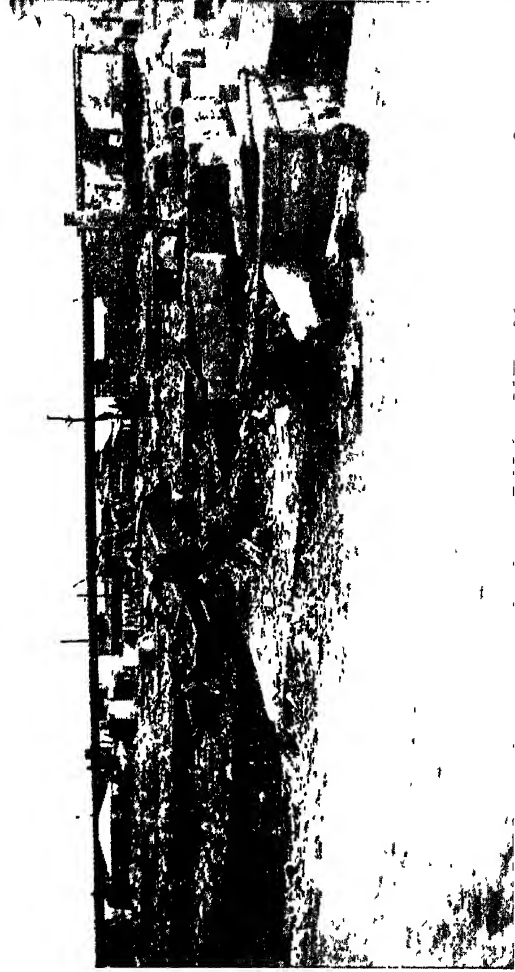
Earthquake and Fire destruction on the buildings of Government Department



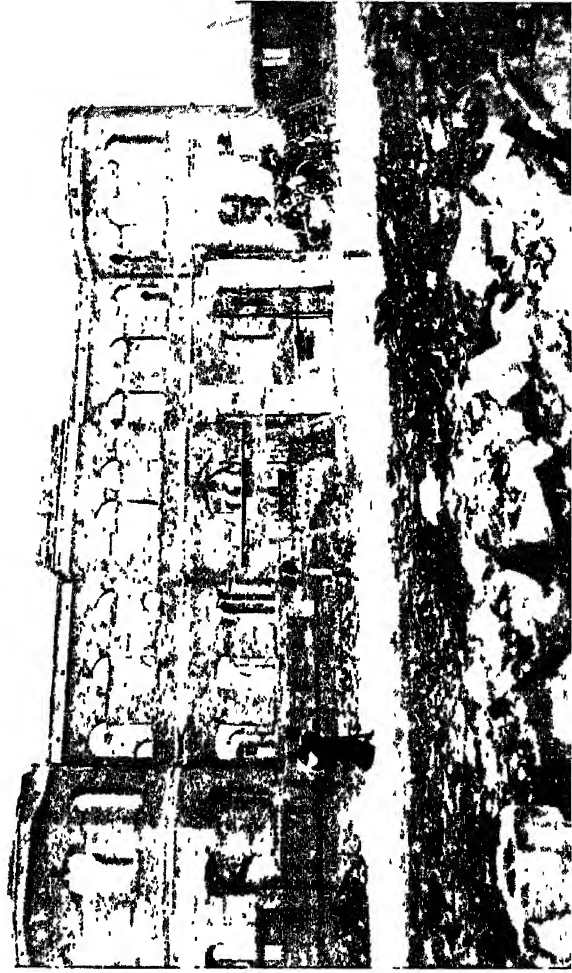
Ushigome Ward Office



Asakusa Ward Office



Honjo Ward Office



Fukagawa Ward Office  
Earthquake and Fire destruction on the buildings of Ward Office of Tokyo Municipality



Russian Cathedral "Nicolai-do"  
before the earthquake



The "Nicolai-do"  
after the disaster



"Seido" at Yushima in Hongo ward, a famous educational institute in the mediæval  
time of Japan, burnt entirely

Yokohama Specie, Taiwan and Sumitomo banks, eight in all, were fortunate enough to escape with no damage. It is needless to add that all banks were obliged to suspend business operations for a time.

As to places of amusement within the City, theatres stood most conspicuous on the list, with the destruction of 20, only 2 theatres escaping injury. Before the earthquake, there used to be 56 cinematograph shows operating in Tokyo, but 43 of them were burnt down by the fire. Besides, there were 68 variety shows, story-tellers' hall and various other shows destroyed by the fire: Here we could suppose 131 were destroyed while 57 survived in the whole City. Asakusa ward suffered most, 11 theatres, 14 cinema shows and 13 other kinds of public amusement shows, consumed by the flames, so that out of a total of 39, there survived only one.

Within the confines of Tokyo City, the number of factories consumed by the conflagration was 7,122, while motors installed there aggregated as many as 9,790, operated by factory hands who numbered 72,379. Compared with figures for pre-earthquake days (as returned on December 31, 1922), the numbers given above represent 70 percent for the former and 80 percent for the latter of the corresponding figures appearing in the statistical returns compiled for the year immediately preceding the Disaster.

Next, we will turn to the damage suffered by households from the Earthquake and Fire. It needs no saying that, in the nature of things, an accurate appraisal of household goods and chattels is very difficult. But, for convenience sake, we will take, as a broad basis of calculation, the total amount of taxes for the fiscal year of 1922-23, supplementing it with the total liabilities undertaken by insurance companies of various kinds for movable properties which suffered from the Earthquake and Fire. As a second step, for facilitating computation, we will group together the following wards into one section and label it as Sector No. 1: Kojimachi, Kanda, Nihonbashi, Kyobashi, Shiba, Azabu and Akasaka; and within this sector, we will presume, for the sake of our present purpose, that the appraised value of the movable property of a single family is 2,400 yen; while in Sector No. 2, which will comprise eight other wards, that is, Hongo, Yotsuya, Ushigome, Koishikawa, Shitaya, Asakusa, Honjo and Fukagawa, the hypothetical value of the movable property belonging to an individual family shall be presumed to be 1,200 yen. Further, we will presume that these appraised sums are given in full for houses within the respective wards, which were entirely burnt down or completely destroyed, while only 60 percent of the same sum is allotted for those buildings which escaped with partial damage or demolition. If computed on these broad principles of calculation, we shall get the astoundingly gigantic sum of 627,-

## THE RECONSTRUCTION OF TOKYO

628,560 yen as the total amount of the estimated value of movable properties belonging to the earthquake-smitten families within the City of Tokyo, whose number is approximately 374,424.

Next, our attention turns to the actual damage to stocks of goods at the shops and stores under the operation and management of private individuals.

According to investigations of the Tradesmen's Union of Tokyo City, there were at the time 104 guilds or unions of tradesmen and merchants in the City; and the estimated value of the losses sustained by them in consequence of the Disaster, aggregated 1,596,920,888 yen. If, then, we add to this the damage suffered by Mitsukoshi Department Store, which did not belong to any union, estimated at 4,379,746 yen, these colossal figures will further swell to 1,601,300,634 yen.

The damage to various warehouses next claims our attention. We have conducted investigation at the nine leading warehouses in the City, namely, Toshin, Sugimura, Watanabe, Mitsubishi, Jitsugyo, Teikoku, Shibusawa, Nihon and Sumitomo, all of which were destroyed by the Earthquake Fire, except only a portion both of the Teikoku and Sumitomo warehouses. The total value of the goods thus reduced to ashes at these nine warehouses, is put at 87,339,557 yen.

Attention must also be given to public parks. As many as twelve public parks were destroyed within the City, while one park fortunately escaped with partial demolition. Eight other parks suffered considerable injury to their trees and shrubberies as well as to the structures standing within them. We give below particulars of the damage to these public parks:

Name	Damage	Estimated loss
Hibiya	Demolished . . . . .	¥ 17,500
Asakusa	Partially burnt . . . . .	166,080
Imado	Wholly burnt . . . . .	18,823
Matsuchiyama	" " . . . . .	22,100
Wakamiyacho	" " . . . . .	15,699
Kakigaracho	" " . . . . .	11,420
Ryogoku	" " . . . . .	16,645
Asakusabashi	" " . . . . .	21,320
Yushima	Demolished . . . . .	1,600
Yedogawa	" . . . . .	1,260
Fukagawa	Wholly burnt . . . . .	129,150

# GENERAL DESCRIPTION OF DAMAGE WROUGHT BY EARTHQUAKE AND FIRE

Ochanomizu	” ”	... ..	15,140
Kojimachi	Demolished	... ..	6,500
Yotsuya	”	.... .	1,000
Atagoyama	Completely burnt	.....	48,000
Yokoami	” ”	... ..	140,000
Shiba	Demolished	.....	18,500
Toranomon	”	.... .	500
Sukiyabashi	Wholly burnt	.. ...	25,000
Sakamotocho	” ”	.... .	54,000
Chidoriga-fuchi	Destroyed	.....	450
Total .....			<hr/> ¥730,687

It may be noted that the above table gives only those public parks whose injuries from the Earthquake were apparently severe and, therefore, could be calculated in terms of money. It need not be said that, at Uyeno Park, no slight injuries were caused both to trees and plants, as well as to public buildings, such as the Tokyo Imperial Museum, etc. But as no exact figures are available about this damage, we abstain from making any estimate of its here.

## CHAPTER II

### Activities of the Imperial Family

#### THEIR MAJESTIES AND THE PRINCE REGENT

At the time of the great Earthquake, Their Majesties the Emperor and the Empress happened to be staying at the Imperial Villa, Nikko, spending the hot summer season, and happily, and to our unbounded joy, no untoward incident occurred to Their August Majesties personally. H. I. H. the Prince Regent, however, was at the Tokyo Imperial Palace just at the moment, attending to important affairs of State. Upon the occurrence of the Earthquake, Chief Chamberlain Irie lost no time in waiting upon His Highness; soon Mr. Sekiya, Vice-Minister of the Imperial Household Department, and other high functionaries, followed suit. His Highness, for a time, took refuge in the courtyard from the violent convulsions of the earth; then at about half-past three o'clock in the afternoon left the Imperial Palace for the Detached Palace at Akasaka, where His Highness remained.

#### PRINCES OF THE BLOOD

It is grievous to mention that three scions of the Imperial Family fell victims to the fury of the earthquake: H. H. Princess Kan-in Hiroko, who happened to be staying at her Odawara villa; H. H. Princess Yamashina, Consort to H. H. Prince Yamashina, at the princely residence, Kamakura; and H. H. Prince Higashi-Kuni Moromasa, at the Fujisawa villa, all met an untimely death. H. H. Princess Dowager Kaya and H. H. Prince Higashi-Kuni Morihiro were fortunate enough to escape with only slight injury. Apart from these Princes and Princesses of the Blood, fortunately nothing untoward occurred to any member of the Imperial Family.

#### DAMAGE TO BUILDINGS UNDER JURISDICTION OF THE IMPERIAL HOUSEHOLD DEPARTMENT

Of all the buildings under the jurisdiction of the Department of the Imperial Household, only a building and the study in the Crown Prince's Palace at Takanawa, and seven other structures were entirely destroyed. The smithy within the precincts of the Imperial Palace ground and over ten other structures were completely demolished by the violence of the quake. Besides, there were reported more than ten other buildings as either partially burnt or tumbled down.



## ACTIVITIES OF THE IMPERIAL FAMILY

### IMPERIAL REPLIES TO TELEGRAMS OF ENQUIRY FROM SOVEREIGNS AND PRESIDENTS OF VARIOUS COUNTRIES, IN CONNECTION WITH THE EARTHQUAKE

Courteous and sympathetic telegrams of enquiry were received, addressed either to H. I. M. the Emperor, or to H. I. H. the Prince Regent, in connection with the disaster, to which replies were duly despatched, conveying expression of thankful appreciation of the kind sympathy for our nation. These telegrams of reply were addressed to H. E. the President of the Republic of France, H. R. M. the Emperor of Italy, H. E. the President of the United States of America, H. B. M. the King of Great Britain, H. E. the President of Chile, H. R. M. the Queen Dowager of Great Britain, H. R. M. the King of Egypt, H. R. M. the King of Sweden, H. E. the President of the Republic of Argentina, H. E. the President of Lithuania, H. E. the President of the United States of Brazil, H. R. M. the King of Siam, H. R. M. the King of Spain, H. E. the President of the Republic of Poland, H. R. M. the Empress Dowager of Italy, H. R. M. the King of Roumania, H. H. the Duke of Monaco, H. H. Prince Maharaja Nawanagal of India, H. E. the President of the Republic of Mexico, H. E. the President of the Republic of Uruguay, H. R. M. the Queen of the Netherlands, H. H. the Prince Regent of Ethiopia, H. R. M. the King of Hejaz, H. E. the President of the Republic of Costa Rica, H. E. the President of the Republic of Portugal, H. H. the Grand Duchess of Aosta and H. H. the Grand Duke of Spoleto of Italy, H. E. the President of the Republic of Nicaragua, H. R. M. the Shah of Persia, H. E. the President of the Republic of Panama, H. E. the President of the Republic of Haiti, H. R. M. the Emperor of Afganistan. Further, on September 14, a telegram of condolence was received from H. B. M. the King of Great Britain, in connection with the lamented deaths of H. H. Princess Yamashina, Consort to H. H. Prince Yamashina, H. H. Princess Kan-in Hiroko, and H. H. Prince Kuni Moromasa. On 18 of the same month, a telegram of thanks was duly cabled in reply.

### IMPERIAL ACTIVITIES IN THE CAUSE OF CHARITABLE WORK FOR RELIEVING SUFFERERS FROM THE EARTHQUAKE

H. I. M. the Emperor, hearing of the unprecedented severity of the damage wrought by the Earthquake and Conflagration, was pleased to grant out of the Privy Purse, the sum of 10,000,000 yen, in aid of charitable activities for relieving the sufferers. On September 3, at 6.30 p.m., Count Gon-no-hyoye Yamamoto, the Prime Minister, proceeded to the Detached



Imperial Palace of Akasaka, in obedience to the Imperial summons, and was granted from H. H. the Prince Regent a message which, as translated, runs briefly as follows:

"It is a grave misfortune to the country and the people alike that Tokyo and the neighboring prefectures have been visited by a great earthquake, the violence of which was quite unprecedented, further aggravated by the outbreak of a disastrous conflagration, thus causing almost unparalleled damage. Hearing of the actual state of things created by these natural calamities, I am filled with distress and anxiety, both day and night. Especially, the pitiable condition to which the poor stricken people have been reduced, is truly deserving of my profoundest sympathy. To alleviate, in whatever degree possible, the sufferings of those people, His Majesty the Emperor has been pleased to grant a monetary gift out of the Privy Purse. It is, therefore, My sincere desire that both the Government authorities and the people at large will unite in harmonious co-operation to devise proper methods for coping with the present extraordinary emergency, so that they may ensure full attainment of satisfactory results."

On September 20, a Cabinet meeting was held, when it was decided that the Imperial donation should be distributed among the sufferers from the Earthquake Disaster, living in the prefectures of Tokyo, Kanagawa, Chiba, Shizuoka, Saitama, Yamanashi and Ibaraki. Accordingly, the "Temporary Earthquake Relief Bureau," after careful investigation, formulated proper measures for the distribution of the Imperial monetary gift among the earthquake-distressed people, on the basis of a rational standard, through the hands of the respective prefectural authorities concerned. The particulars of the distribution are as follows:

Prefectures	Money distributed
Tokyo . . . . .	¥7,108,879
Kanagawa . . . . .	2,519,424
Chiba . . . . .	200,782
Shizuoka . . . . .	86,435
Saitama . . . . .	65,519
Yamanashi . . . . .	15,822
Ibaraki . . . . .	3,139

SPECIAL MESSENGERS DESPATCHED BY THEIR MAJESTIES TO  
INSPECT ACTUAL CONDITIONS

T. I. M. the Emperor and the Empress were graciously pleased to dispatch,



H. I. H. the Prince Regent's Inspection Tour, hearing actual reports from the Mayor of Tokyo, Chief of the Metropolitan Police Board and Home Minister, at Ueno Park



The Prince Regent's Inspection Tour on horse-back at Fukagawa ward



Inspection by H. I. M. the Empress on poor sufferers



The activity of Imperial Household Department by medical relief

## ACTIVITIES OF THE IMPERIAL FAMILY

as their special messengers, chamberlains or aides-de-camp, as many as ten time, during the nineteen days from September 3 to 21, to the City of Tokyo and the prefectures of Kanagawa, Chiba, Shizuoka and Saitama, for the purpose of inspecting the actual consequences of the earthquake and the real condition of the afflicted people in those regions, and also of giving them consolation and comfort.

### INSPECTION BY H. I. H. THE PRINCE REGENT

For the purpose of making personal inspection of the earthquake-stricken districts, H. I. H. the Prince Regent left his Palace of Akasaka at six o'clock on the morning of September 15, and proceeded on horse-back to Ueno Park, accompanied by Chief Aide-de-camp Nara, General Fukuda, Commandant of Martial Law, and a number of high Court functionaries. In the course of the tour, His Highness was pleased to pay a visit to the Office of the Commandant and saw the actual management of business by the officials there. Then he returned to the Palace. Again on 18, he set out on another inspection tour, this time to the down-town districts, first to the Army Clothing Dépôt in Honjo ward. After a round of personal inspection of the wretched condition of the earthquake-smitten inhabitants of those localities, which was clearly visible everywhere on either side of the routes, His Highness returned to his Palace of Akasaka.

### IMPERIAL DONATIONS TO VARIOUS ORGANIZATIONS FOR PUBLIC CHARITY AND SOCIAL WELFARE

Not a few of the leading bodies or organizations devoted to social work, protection of released criminals, education of the deaf, blind and mute, and so on, fell victims to the earthquake disaster. Being highly solicitous for the seriously injured, His Majesty the Emperor was graciously pleased to grant, on September 16 and again on October 4, 1923, a certain sum of money to 54 such organizations, helping them in a substantial way. The Imperial bounty was duly bestowed through the Ministers of Justice, Home Affairs and Education.

### INSPECTION BY H. I. M. THE EMPRESS

H. I. M. the Empress was pleased to make a round of inspection, according to the following schedule, through the earthquake districts in the City of Tokyo, for the purpose of gaining first hand knowledge of the actual extent of the ruin wrought by the calamity, and also of affording personally to the sufferers Imperial solace and comfort.

## THE RECONSTRUCTION OF TOKYO

September 27—Ueno Railway Station, Ueno Park and the old site of the Exhibition, calling at the Izumibashi Hospital on the way back.

September 30—The Japan Red Cross Hospital, the Aoyama Gaku-in (an educational institution maintained by an American Christian Mission), the Keio University Hospital, and the First Army Hospital.

October 2—A visit to the Laboratory of the Infectious Diseases Research Institute, the "*Saisei-kai*" Charity Hospital, and the Imperial University Hospital.

On October 13, H. I. H. the Prince Regent paid a visit of inspection to the *Bei-Hi* (American-Philippine) Hospital, then in process of preparation for active operation, within the compounds of the mansion of H. I. H. Prince Takamatsu, at Azabu.

### IMPERIAL GIFTS AND OFFERINGS ON THE OCCASION OF VARIOUS MEMORIAL SERVICES FOR THOSE WHO LOST THEIR LIVES IN THE EARTHQUAKE

On November 19, a great religious service was held at the old site of the Army Clothing Depôt, Honjo, under joint auspices of the City and the Prefecture of Tokyo, in the memory of those who perished in the Earthquake and Conflagration. On this occasion, T. I. M. the Emperor and the Empress were pleased to grant a donation of 1,000 yen towards the expenses of the ceremony, thus showing deep Imperial sympathy for those who met an untimely death in the disaster. Further, a set of flower-baskets was presented by special grace of the Imperial Household. H. I. H. the Prince Regent and the different Princes of the Blood were pleased to make similar donations.

### AMBULANCE MEDICAL RELIEF CORPS

This medical corps was organized on September 13, in obedience to H. I. M. the Empress, for the express purpose of affording help and relief to sickly children, and women in child-bed. On the same day, the 1st and 2nd divisional corps were organized; and they at once set about the work of charity, making rounds through the city districts. On 14, five other divisional corps, that is, the 3rd to the 7th, were got up, and they also commenced ambulance activities at once, going around the city on foot. On 16, a company was dispatched to Yokohama on the same mission, the 4th divisional corps being selected for the purpose, with a slight modification effected in its

## ACTIVITIES OF THE IMPERIAL FAMILY

organization. To take the place of the 4th corps, thus left vacant by this step, a new divisional corps was immediately created; and it was named the 8th divisional corps. Further, on October 18, another divisional corps, called the 9th divisional corps, was organized, and it was also dispatched to Yokohama.

# CHAPTER III

## Arrangements and Measures for Earthquake Relief

### SECTION I

#### GENERAL REMARKS

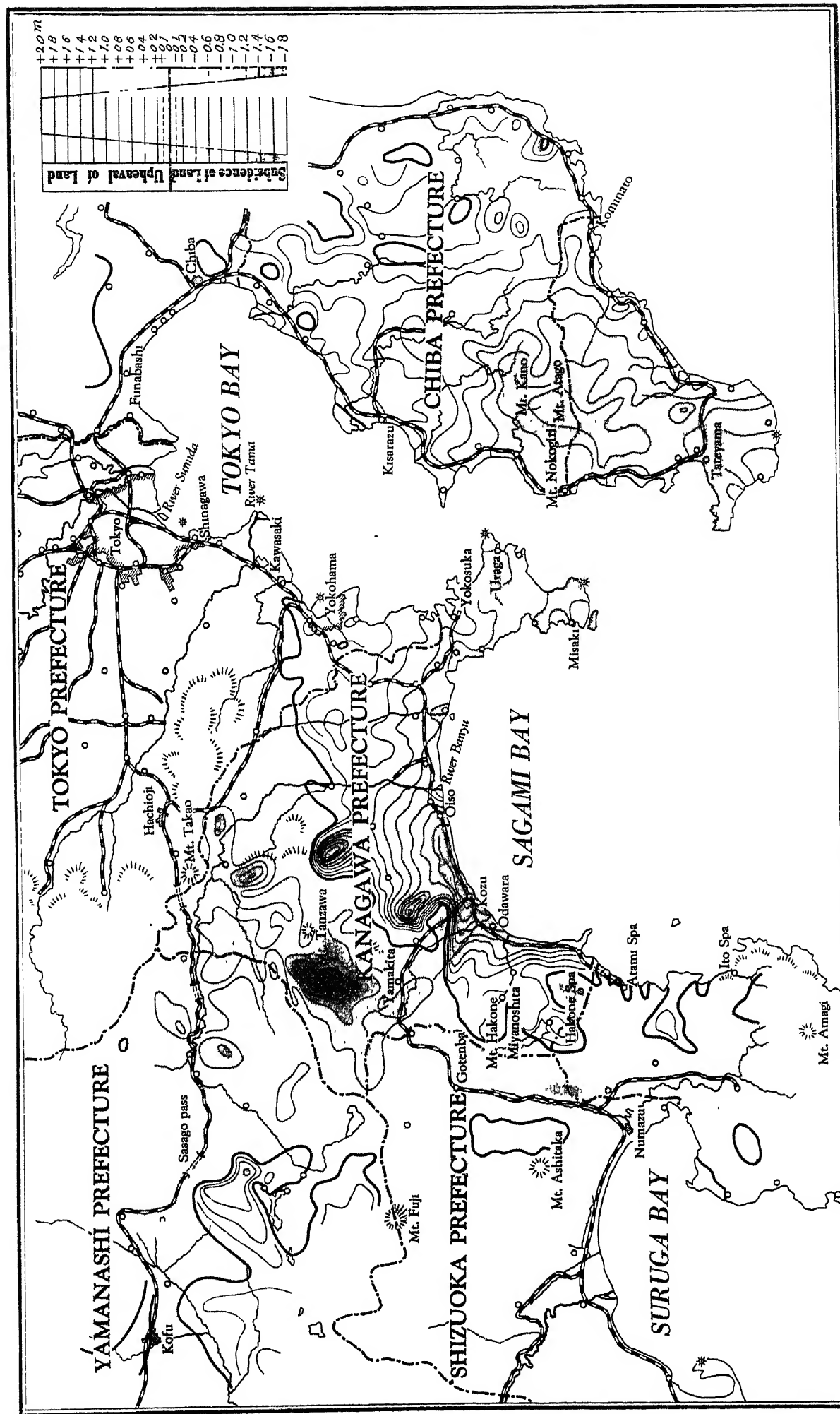
Soon after the Earthquake Disaster, H. I. M. the Emperor was pleased to issue an Imperial Edict (given, in translation, on the head page), on September 12, wherein His Majesty graciously laid down general principles for the rebuilding of the cities and towns reduced to ruins. Thus, the Imperial Edict was to serve as a beacon-light leading the people in the path of reconstruction and resurrection.

On September 16, the Cabinet issued a proclamation of similar import. Again on November 10, there was issued another Imperial Rescript, embodying the Imperial solicitude in connection with the maintenance of a sound and vigorous spirit among the people at large, showing to the whole nation the exact line of conduct to follow in their civic life, as His Majesty's obedient subjects, at that time of unprecedented national calamity, and that the colossal task of reconstruction would be impossible except by the preservation of a vigorous national spirit. On the following day, November 11, the Cabinet again issued a proclamation to the whole nation, by way of supplementing the purport of the Imperial Rescript. Indeed, the people, one and all, were firm in their determination to follow the Imperial injunction.

Thereupon, the Government at once proceeded to unify and put in order the various schemes projected for the work of reconstruction. First of all, they decided to make two great divisions in the work, that is, (1) emergency measures and (2) measures for permanent reconstruction. In the division of "emergency measures," they thought it expedient to have again two subdivisions, that is, (1) relief work and (2) policing, or safeguarding security. For the purpose of being better able to function in the former sub-division, the authorities established a special central organ called the "Temporary Earthquake Relief Bureau." This Bureau intended to serve as the motive power of the whole system of relief work and operation, both in the formulation of plans and the direction of their execution. On the other hand, the Government specially established a Board of Command for the Enforcement of Martial Law in the Kwanto Districts, and entrusted to it the general task of seeing to the safe-guarding of peace and securing in those districts. Such,



# THE PERPENDICULAR CHANGES OF LANDS BY THE EARTHQUAKE OF 1923 IN KWANTO DISTRICTS



This map shows the actual condition of upheaval and subsidence caused by lands, revealed from resurveying of the standard water level of the trigonometrical point after the Great Earthquake of 1923.





however, was not the only machinery, at that time, for the preservation of order and tranquility in the earthquake-disturbed localities. The different departments of the Government, the autonomous local bodies and authorities, as well as a thousand and one sorts of petty self-policing organizations, both public and private, which were immediately organized in different districts swept by the destructive waves of the Earthquake, were all eager and strenuous in properly performing the duties that devolved on them.

In the second part of the work, that is, the "measures for permanent reconstruction," the first thing that claimed attention was the work of reconstructing the destroyed cities and towns, and then the work of repairing or restoring what was demolished by the Earthquake. For realization of these measures, the Government established a special organ named the "Board for Reconstruction of the Capital." Thus, in the full spirit of co-operation, by uniting its efforts and energies, with the local self-governing bodies, it set about the great work of rebuilding the cities of Tokyo and Yokohama.

Meanwhile, the different Government Offices and the prefectural authorities, too, were by no means idle; indeed, they vied with each other in scoring the best results, quickly and successfully, in connection with the work of reconstruction. The adjustment of the civic appearance, the repair and construction of roads and streets, the opening of canals, the laying out of public parks, the extension of the sewerage system and the water supply arrangements, the establishment of "fire prevention zones" and the defining of residential districts, the construction of schools and hospitals, the opening of markets, the inauguration of various social works, the improvement of the means of traffic and communication, and so on,—all these were comprised in the gigantic plan of what was known as the "Reconstruction of the Capital." On the other hand, the scheme for Restoration embraced and covered the work of repairing, or restoring to their original condition the buildings for Government Offices, schools, shrines, hospitals, factories, depôts, railroads, telephone and telegraph services, rivers, ports and harbours, roads and ways, bridges and other sorts of structures and constructions. For the Municipality of Tokyo there were besides these tasks, the works of rebuilding the ward offices destroyed, the proper adjustment of the educational arrangements at various schools under its jurisdiction, the construction of libraries, hospitals and street lavatories, the lighting or illuminating arrangement for public parks, the improvement of river communication, as well as the restoration of the electric enterprises and the sewerage and water supply systems,—all pressing in their demand for urgent municipal attention.

For the purpose of materializing all these schemes and undertakings, the

## THE RECONSTRUCTION OF TOKYO

Government decided to make emergency disbursement, as indispensable and urgent, of 118,942,380 yen, besides the sum of 8,100,000 odd yen, for emergency railway expenses. The City of Tokyo also followed the Government, and laid out a great sum for effecting emergency measures. (Vide Sect. IV.)

The foregoing is a concise description of the exertions of the Government, on the basis of plans and principles formulated in accordance with the spirit of the Imperial Edict which indicated the way in which the disastrous consequences of the earthquake should be dealt with. In the ensuing pages, we set forth, section by section, a more detailed account of the salient facts in connection with the manifold projects and enterprises, both of emergency and permanent nature as executed by the Imperial Government and the Municipality of Tokyo.

### SECTION II

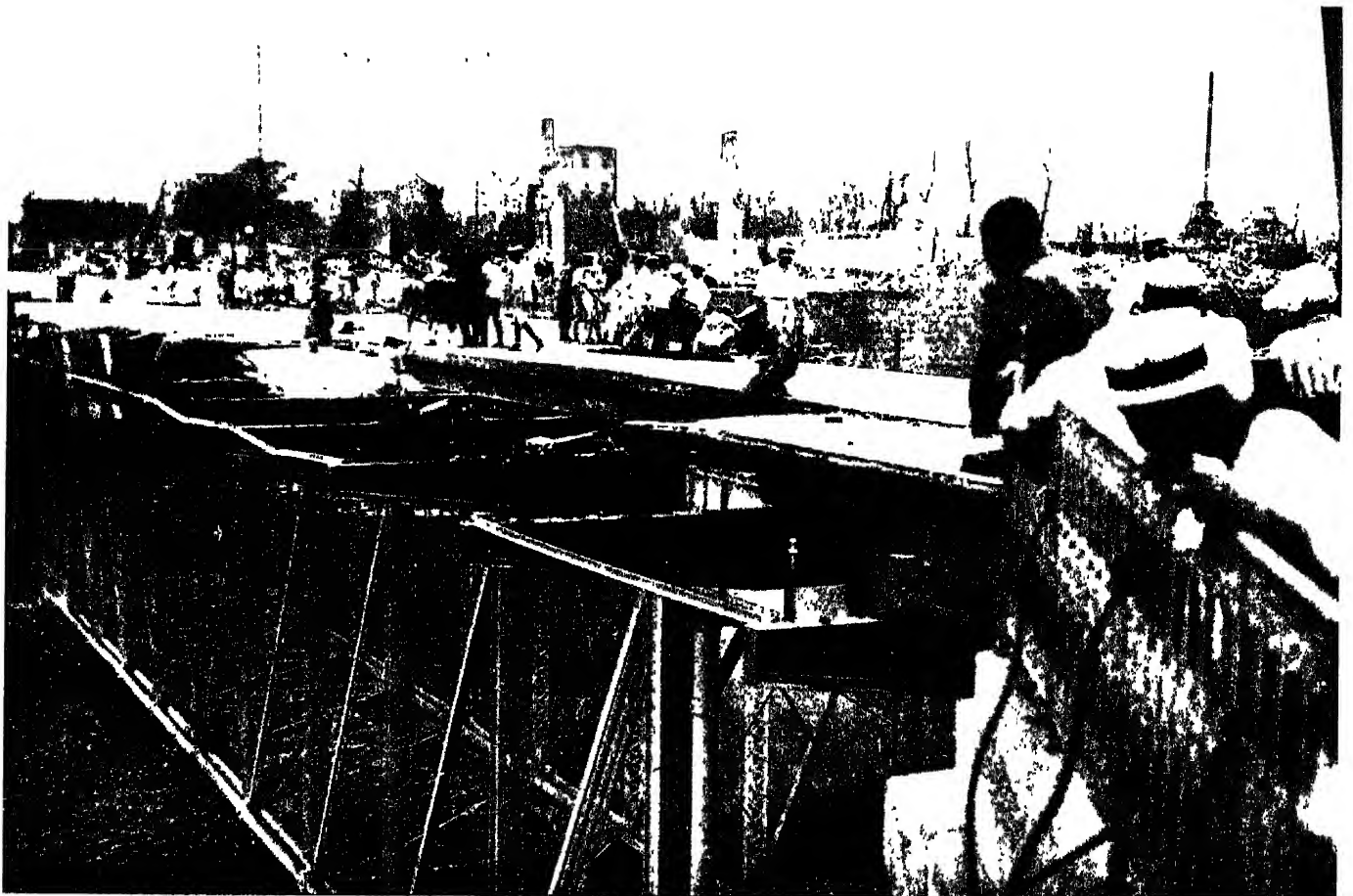
#### EMERGENCY MEASURES TAKEN BY THE GOVERNMENT

As already described, the first emergency steps the Government took, upon the outbreak of the earthquake, were for the strict preservation of peace and order, the protection and transport of refugees, the supply and distribution of the necessities of subsistence to the houseless and starving sufferers, the securing of work for the unemployed, as well as medical relief for the sick and injured; while, on the other hand, the authorities made great efforts in the provinces, for the consolation and general relief of those who had fled into the country to seek refuge from the terrors of destruction. Further, the Government authorities, as an immediate measure, ordered the quick repair or rebuilding of roads and bridges, the restoration of satisfactory traffic by water, the repair or reconstruction of railways and electric tramways, the perfecting of telephone and telegraph services, the disposal of ashes and debris in the fire-devastated districts, the supply of drinking water, the proper supply of illuminating arrangements, the provision of satisfactory transit and communications, the arrangement for housing convenience, and the supply of text-books and school requisites to students, and especially to the pupils of elementary schools, and the speedy resumption of actual teaching, by utilizing those school buildings which had fortunately escaped destruction by fire, or by specially setting up temporary "barrack" buildings for the purpose.

Of the above arrangements, that for safeguarding peace and order in the Capital was at first taken charge of by the Commander of the Tokyo Garrison. But with the establishment, as mentioned already, on September 3, of the Board



The Activity of military corps for temporary improving of Azuma-bashi Bridge



Temporary arrangement of Ochanomizu-bashi Bridge by the military corps



Clearing away of destroyed materials for roads and street by the military corps



Ready for break by explosion



Explosion for clearing of obstacles

of Command for the Enforcement of Martial Law in the Kwanto Districts, the duty of seeing to the preservation of order and security in the City was naturally transferred to the new organ; or, in other words, to the joint jurisdiction of the Army and Navy Departments. Towards the close of the month, the police and gendarmerie forces were reinforced and strengthened, so that their proper duties might be better performed. Subsequently, on November 15, the Board of Command in question was dissolved, and in its stead the "Board of Command for the Security of Tokyo" took charge of the duty. On the other hand, the citizens at large organized, on their own initiative, what was then popularly called "Self-policing Bodies" for the purpose of supplementing the strength of the police force.

The work of supplying clothing and other indispensable necessities of subsistence to sufferers really formed the most active and efficient part of the strenuous exertions put forth both by the Government and the general public, either individually or collectively. With the inauguration, on September 2, of the "Temporary Earthquake Relief Bureau," the activities instantly grew more marked and energetic, under the able direction of the said Bureau. In order to supply the deficiency in the stock of foodstuffs and other necessities of life, in consequence of the wholesale destruction, steps were immediately taken for the importation of a portion of the Government's stock of rice lying warehoused at Osaka. In effect, all imaginable resources in the provinces were quickly and promptly placed under requisition for the benefit of the famishing people of Tokyo. The food staples and articles thus collected were landed under care of the naval authorities, and then their proper distribution was effected through the Army authorities. The actual distribution among the suffering people, however, was done by the authorities of the respective local autonomous bodies. At first, it was "general rations," and then it was changed to "restricted rations," which was however, subsequently altered to "sale at fixed prices," thus intending to bring back this temporarily dislocated state of things to normal condition, by gradual steps and stages. On the other hand, the authorities were obliged, at one time, to put into effect the measure of "emergency requisition," and even deemed it advisable to think about the reduction or lifting of import duties, or to provide for the control of profiteering, always notoriously rampant at such times of natural calamity. Of course, all these arrangements were apparently motivated by the Government's desire to facilitate a smooth and easy supply of the articles of daily necessity. Above all, we may mention that the authorities devoted special attention to the work of relieving sufferers in a particularly wretched condition, who, being deprived of all means of self-support, and having none to look to for help, either as friends or relatives, had to



seek refuge in public parks or squares. Therefore, the authorities promptly provided all those people with camping tents or other means of shelter. In some cases, they helped people to collect half-charred timbers and beams still lying in confused heaps on the devastated sites of the disasters, and allowed them to set up makeshift sheds and shanties to shelter themselves from the inclemencies of the weather. In other cases, they were afforded accommodation at some Government buildings, schools, temples, or even at the residences of charitable private individuals, where, indeed, their pressing need of hunger was always immediately gratified. Later, they were provided with the necessary cooking utensils and make to cook for themselves. On the other hand, the authorities put up what was then popularly called "barracks" that is, temporary tenement houses for collective habitation, for the benefit of the poorer sufferers. Afterwards, when the weather gradually began to assume winter severity, necessary clothing was specially distributed among them.

Those people who had absolutely no one to turn were sent either to infirmaries or infant homes, or other public charity houses, for accommodation, under care of the respective local authorities concerned, or through private charity organizations. As to sick or wounded people, they were also properly dealt with, under efficient direction of the "Temporary Earthquake Relief Bureau," or the care of the prefectural or municipal authorities, or of the Japan Red Cross Society, the "*Saisei-kai*" (a charity medical society), or medical schools, hospitals and sundry other organizations for charity medical help.

As to those who left the Capital seeking refuge in the provinces, they found assistance at the hands of the Railway Department, Navy Department, different prefectural Governments, local autonomous bodies, various shipping or railway companies, the reservists' corps in the provinces, the local young people's guilds, the firemen's guilds, charity organizations, religious and educational bodies, as well as women's associations. In some cases, they were accorded the privilege of free transport and lodging; while in other cases, they were gratuitously provided with necessary provisions and articles of daily use, or medical aid, if necessary, to say nothing of the warm-hearted manifestations of sympathy which were extended to them everywhere they went.

Finally, those who had been thrown out of employment in consequence of the Disaster, found kind sympathizers in the Social Bureau in the Home Department, a kindred section and the bureau in the City and the Prefectural Office of Tokyo, which did their best to find, for those unemployed, suitable work and occupation. On the other hand, people suffering from want of capital to start business with, were set upon their feet again by a timely and highly effective arrangement of the Finance Department, the (now defunct) Department of

Agriculture and Commerce and others, which, under certain conditions, were ready to advance small loans to such people, in order to enable them to launch again into business with this Government pecuniary succour.

As regards the disposal of the dead found among the ashes and débris of the earthquake-davastated areas, the municipal authorities of Tokyo, with the help of various public bodies, made themselves principally responsible. The remains were carefully sought and collected, and, after the due performance of funeral rites by different religious sects, proper interment was made.

As to the work of clearing rivers and the temporary construction and repair of bridges and roads, all were executed by the City of Tokyo, with the assistance of military engineers and local organizations for public help, and, in the case of the repair of tramways and railroads, with the help of the Railway Department. The restoration of the deranged telephone and telegraph services was effected by the Communication Department, with the necessary help of the Army, Railway, Engineers and Telegraph Corps.

The different educational organs, which had so far remained in absolute inactivity, now began to resurrect, under the nursing of the Education Department, and all schools, both public and private, resumed regular work again. In unavoidable cases, the transference of pupils and students to other schools was permitted, as an inevitable measure under the extraordinary circumstances.

Thus, the emergency measures were put into operation on September 1, 1923 and continued in force for seven months, that is, till the abolition of the "Temporary Earthquake Relief Bureau" on March 31, 1924. However, there still remained a variety of business to be dispatched even after the date of abolition.

Below is given a table setting forth the more important items with respect to the execution of the "emergency measures" during the period from September 1, 1923, till March 31, 1924, when abolition of the said Bureau for Temporary Earthquake Relief was promulgated.

September 1, 1923—In accordance with the direction and command of the War Minister, the Commander of the Tokyo Garrison ordered the Imperial Guards and the First Army Divisions to attend to the task of safe-guarding the security of the Capital, by indicating the limits of the area allotted respectively to the care of each of the two Army Divisions.

The Navy Department despatched a telegraphic order to the different Naval Stations, and naval ports, commanding them to despatch warships to Tokyo and to transport articles of urgent necessity. The special service-ship Koshu, of the Imperial Navy, arrived off Shina-



gawa, in the Bay of Tokyo, and took over the duty of ensuring maintenance of perfect communications. The service of free medical treatment opened at the Municipal Office and elsewhere.

September 2—Ordinance for Emergency Requisition promulgated. Ordinance for Martial Law promulgated.

The "Temporary Earthquake Relief Bureau" specially established.

A sum of 9,600,000 yen disbursed out of the National Treasury for relief work.

At 7 p.m., No. 1 of the "Bureau's Bulletin on the Earthquake Disaster" issued. (The publication continued till October 25)

September 3—At 10 a.m., the conflagration at last came to an end. H. I. M. the Emperor was pleased to grant a monetary gift out of the Privy Purse.

H. I. H. the Prince Regent was pleased to grant a message. The Imperial Household Department organized an ambulance medical relief corps.

A Board of Command for the Enforcement of Martial Law for the Kwanto Districts was specially established.

General Masataro Fukuda was appointed to the commander of the same.

The "Naval Earthquake-disaster Relief Organization" was established. The general supply of drinking water commenced.

The Imperial Railways decided to allow free transportation to sufferers from the Earthquake, seeking refuge in the provisions, and other people deserving of the privilege.

The Home Department issued instructions to the Governors of the neighbouring prefectures on the subject of the treatment of refugees from the Earthquake calamity.

September 4—The Cabinet issued certain instructions.

"Barrack" buildings began to be constructed at spots where the Earthquake refugees were congregated.

A portion of interrupted railway traffic was restored to normal operation.

September 5—The Commander of the Combined Fleet arrived off Shinagawa, aboard his flagship.



Perfect feature of the buildings before the disaster



Entrance of a department  
store



Damage to a concrete structure



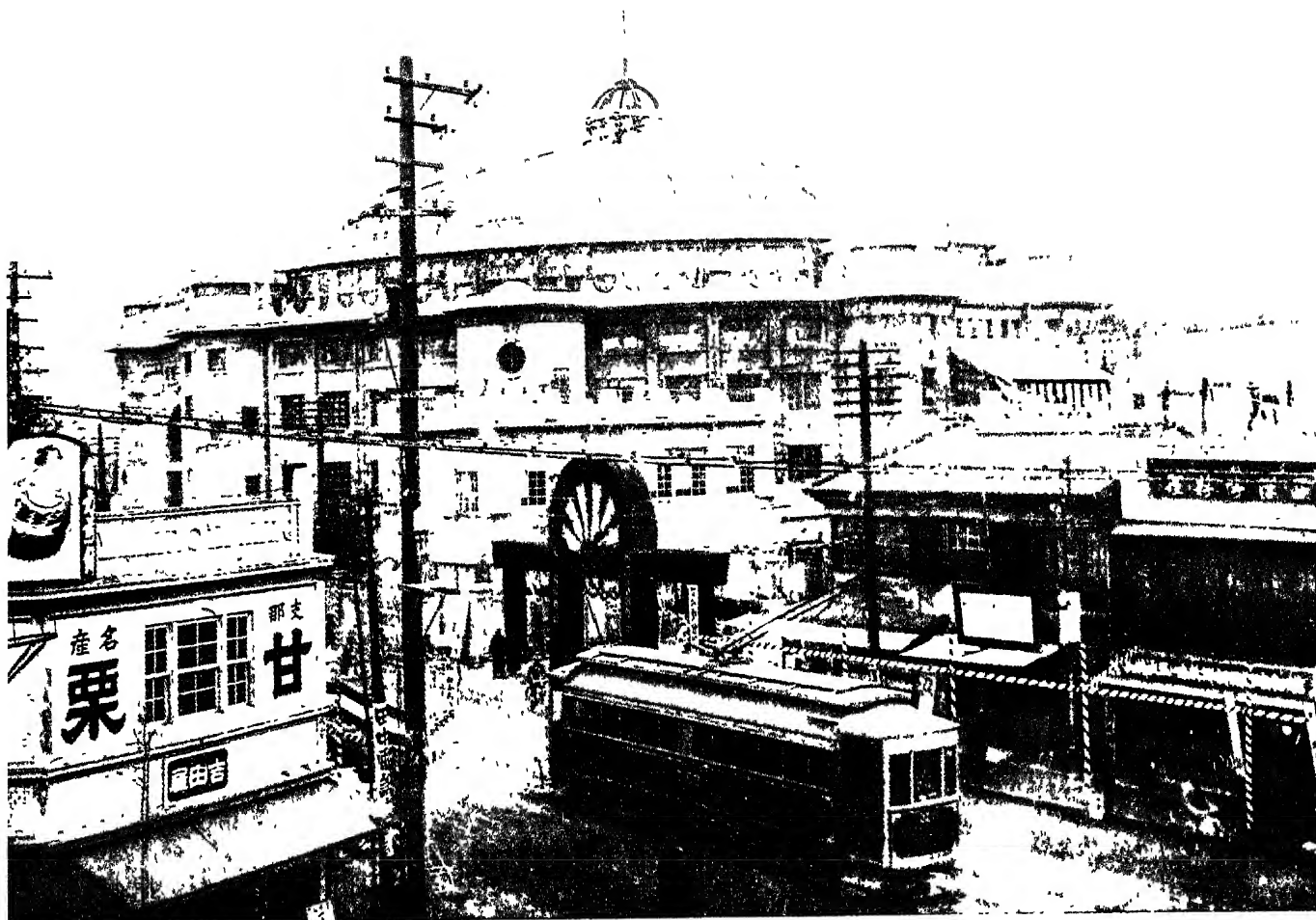
A specimen of ferro-concrete building burnt  
The most miserable style of buildings after the earthquake



One of the most famous theatres in Japan "Kabuki-za," with its typical Japanese performance "Kabuki," before the Earthquake



The "Kabuki-za" wholly burnt in the Fire



"Kokugi-kan," a big stadium of Japanese wrestling "Sumoh," before the earthquake



The "Kokugi-kan" in the devastated field



September 6—The Board of Command for the Combined Fleet was established in the Navy Department.

The City electric tramway partially resumed normal service, and on all lines free service was offered as a temporary emergency measure.

At all surviving post-offices within the City, the regular acceptance and delivery of mail matter was resumed again. The first remittance of the relief money collected by the sympathy of the U. S. Red Cross Society was handed over. The U. S. destroyer conveying articles and materials for relief arrived at Shibaura, in the Bay of Tokyo.

The supply of electricity for lighting purposes recommenced over a larger part of the City (limited to a single lamp in a single house).

September 7—An Ordinance issued for the control and suppression of unlawful profiteering.

An Imperial Ordinance issued, embodying penal provisions in connection with the maintenance of peace and order. An Imperial Ordinance also issued, providing for extension of the period of reservation of the right to checks and drafts, as well as for the postponement of the fulfilment of liabilities (moratorium).

Again, another similar Ordinance issued, for the purpose of defining special cases of revenue and expenditure.

The Finance Department issued an Ordinance, by which the date of payment of the salaries, payments and allowances was extended specially for the month of September only, solely for the benefit of Government officials and employees in the Earthquake-visited districts.

The Commander of the Second Squadron was appointed to the command of the sea transport service, and made to supervise and direct the same business at Shibaura.

September 8—Municipal public markets temporarily opened at four different places. The first O. S. K. "free service" steamer, to ply between Shibaura and Osaka, left Tokyo.

Regular service of the City Water Works partially recommenced.

September 9 —The Minister of Education issued a proclamation.

The Rokugo bridge opened to traffic again.

The automobile service between Tokyo and Yokohama re-established.

September 10 —The Board of Command of the Training Squadron transferred to the port of Shimizu, Shizuoka prefecture, and made to superintend the business of putting the refugees ashore, as well as the general business connected with them.

The companies and contingents specially despatched from various Army Divisions in the provinces, mostly finished, by this date, taking up positions allotted to them according to plan. Foodstuffs sold to the general public at the public markets and elsewhere.

Further collection and requisition of rice and other cereals stopped.

September 11—Special messengers of His Imperial Majesty the Emperor were despatched to Tateyama, Hojo and Funagata, all in Chiba prefecture. The War Department established its own commission for the relief of distress on account of the Earthquake devastation, to which was transferred the relief business hitherto undertaken by the Board of Command for the Enforcement of Martial Law in the Kwanto Districts, the same Board hereafter to see only to safeguarding peace and security in the localities placed under its jurisdiction.

An association organized for the purpose of devising and executing measures for reconstruction of the Earthquake-destroyed towns and cities.

September 12—An Imperial Edict issued in connection with the Earthquake Calamity and the Reconstruction of City.

Imperial messengers sent to Atami and Odawara, and elsewhere. The reduction or remission of taxes announced for the benefit of Earthquake sufferers.

A similar extraordinary measure adopted in regard to importation of daily necessities of subsistence, as well as for tools and materials for public engineering works.

September 13 —The Board of Command for the Enforcement of Martial Law changed its plan and policy of safeguarding peace and order, substituting "concentrated methods" for the "scattered disposition" hitherto adopted in stationing forces; and also the "patrolling system" for "individual safeguarding." Repair of the piers at Yokohama harbour completed.

September 15 —H. I. H. the Prince Regent made a mounted inspection in the Earthquake-devastated districts.

## ARRANGEMENTS AND MEASURES FOR EARTHQUAKE RELIEF

The Mayor of Tokyo issued a proclamation.

The business of transporting Earthquake-distressed Chinese to Shanghai commenced.

September 16 —The postponement of the Wedding of H. I. H. the Prince Regent announced.

A sum of 30,000 yen granted by the Emperor to 34 different public bodies devoted to various social works.

The Cabinet issued a proclamation.

The Army Earthquake Relief Commission finished its work of repairing and adjusting roads and ways in the City of Tokyo.

September 17 —An ammendment effected in the Official Organization of the Temporary Earthquake Relief Bureau.

A supplementary disbursement of 16,600,000 yen for Relief Work announced.

The Cabinet decided ways and means of employing public donations in connection with the Earthquake disaster.

The work of blowing up partially destroyed buildings and masonry works within the City undertaken by military engineering corps, commenced.

September 18 —H. I. H. the Prince Regent made an inspection of the Honjo and Fukagawa districts.

September 19—The Surveying Ship "*Yamato*," of the Imperial Japanese Navy, commenced 1st-term surveying of the seas included within the Earthquake-affected region.

Official Organization of the "Board to Consider the Reconstruction of the Capital" announced.

September 20 —The selling of Government-owned stock of rice commenced.

September 21 —The abolition announced of the Board of Command of the Combined Fleet, as set up in the Navy Department.

Regular traffic re-opened over the whole Tokaido Line (at certain points, however, connection by foot was still necessary).

September 22 —A change made in the duties and disposition of the Squadron. An Imperial Ordinance issued regulating the temporary supply of daily food, and the disposal of the Imperial gift to Relief Funds as well as the donations from the general public.



## THE RECONSTRUCTION OF TOKYO

The post-offices resumed handling postal cards and general mail matter.

September 23 —Ueno Railway Station re-opened to traffic.

September 25 —Many private and public secondary schools resumed teaching.

September 27 —Official Organization of the "Board for Reconstruction of the Capital" promulgated.

September 28 —At the Imperial Palace, H. I. M. the Emperor held the august ceremony of personally announcing the national calamity before the shrine of the Imperial ancestors and two other shrines within the grounds of the Palace.

September 29 —H. I. M. the Empress returned to Tokyo from the Nikko Imperial Villa. Her Majesty made a trip of inspection in the Earthquake districts.

The regular supply of electricity for lighting purposes by the City was fully re-established. Telephone communication fully restored within the City.

September 30.—H. I. M. the Empress was pleased to visit the Japan Red Cross Society and some other places.

October 1 —The electric railway line between Tokyo and Yokohama opened to traffic again.

October 2 —H. I. M. the Empress visited the Infectious Diseases Laboratory and some other places.

October 5 —Railway traffic on the Central Line (from Tokyo to Nagoya through Kofu and Shiojiri) restored to normal.

October 6 —An Imperial gift of 10,000 yen granted to various public corporations devoted to social work, in connection with the Earthquake disaster.

Municipal Assembly of Tokyo City held its first meeting after the Earthquake.

October 10 —H. I. H. the Prince Regent made a tour of inspection to Yokohama and Yokosuka.

October 12 —Mayor Nagata, in the capacity of its President, issued a message of injunction to the Joint Young Men's Association of Tokyo City.

October 13 —H. I. H. the Prince Regent inspected the America-Philippine Hospital, within the premises of the mansion of H. I. H. Prince Takamatsu, in Azabu ward.

## ARRANGEMENTS AND MEASURES FOR EARTHQUAKE RELIEF

- October 15 —T. I. M. the Emperor and Empress returned to the Capital from Nikko.
- October 16 —The abolition of the Kanagawa branch office for Temporary Earthquake Relief Bureau announced.
- October 18 —The Municipal Assembly of Tokyo City decided on a financial policy in connection with the employment of special funds set apart for the permanent restoration of the Earthquake-devastated City.
- October 19—Under the joint auspices of the Governor of Tokyo Prefecture and the Mayor of Tokyo, a memorial service was held at the old site of the Army Clothing Depot, Honjo, for those who lost their lives in the Earthquake and Fire.
- October 22 —The Municipal Assembly of Tokyo City passed a resolution in connection with the Expenditure for the work of restoration from the disastrous consequences of the Earthquake (the expenditure for relief of sufferers from the disaster and the expenditure for the execution of emergency measures).
- October 25 —The enforcement of Martial Law withdrawn from the two prefectures of Chiba and Saitama.
- October 29 —Finished work of transporting the Chinese sufferers to Shanghai.
- October 31 —The military detachments despatched to various places in the provinces all withdrawn.
- Imperial gift distributed among the prefectures concerned.
- November 1 —The warship stationed at Shinagawa withdrawn. At the same time the wireless station temporarily established at Shibaura was abolished.
- The work of relieving sufferers from the Earthquake ended.
- November 3 —The Imperial gift formally delivered to the Prefecture of Tokyo.
- November 5 —H. I. M. the Empress was pleased to make an inspection of the actual devastation caused by the Earthquake in Yokohama.
- November 10 —An Imperial Rescript issued for strengthening and maintenance of the national spirit.
- November 11 —The Prime Minister issued a proclamation.
- November 13 —A report made at the Municipal Assembly to Tokyo City in connection with the granting of a monetary gift from His Majesty the Emperor, and also on the subject of donations from the general public.

## THE RECONSTRUCTION OF TOKYO

- November 15 —An investigation instituted with regard to sufferers from the Earthquake Disaster. Martial Law abolished.
- November 19 —H. I. M. the Emperor was pleased to bestow a monetary gift in connection with the memorial service held for people who perished in the Earthquake calamity.
- November 29 —An amendment made in the Official Organization of the “Temporary Earthquake Relief Bureau.”
- November 30 —H. I. M. the Empress visited the “*Kyochō-kai*” Temporary Hospital, Kyobashi Temporary Hospital, Fukagawa Temporary Red Cross Hospital and the Imperial Household Department’s ambulance Medical Relief Corps at Yokoami-cho Honjo ward.
- December 3 —The Municipal Assembly of Tokyo City voted a resolution in connection with the election of the members of the Reconstruction Committee, and nine other items.
- December 7 —H. I. M. the Empress paid a visit to the Peeresses’ School and the South Manchuria Railway Hospital.
- December 24 —The Law relating to Special City Planning and the Budget for the Reconstruction of the Capital both promulgated.
- December 25 —The Municipal Assembly of Tokyo City adopted a resolution in connection with the Budget for Electric Enterprises. At the said Assembly, the Mayor explained the projected plan for the Reconstruction of the City.
- March 30, 1924 —The electric tramway service in Tokyo City completely restored to former state of operation.
- March 31 —The abolition of the “Temporary Earthquake Relief Bureau” announced.

## SECTION III

### PROCLAMATION OF THE MAYOR

The Mayor of Tokyo, profoundly moved by the august solicitude of His Majesty in connection with the reconstruction of the Capital, as revealed in the Imperial Edict granted on September 12, 1923, and filled with firm determination to realize the Imperial Wish and Command at all costs in the arduous task of rebuilding the Imperial Capital then lying in ruins, promptly issued a mayoral proclamation to the citizens of Tokyo on September 15, with the express purpose of stirring up fires of enthusiasm for the gigantic task



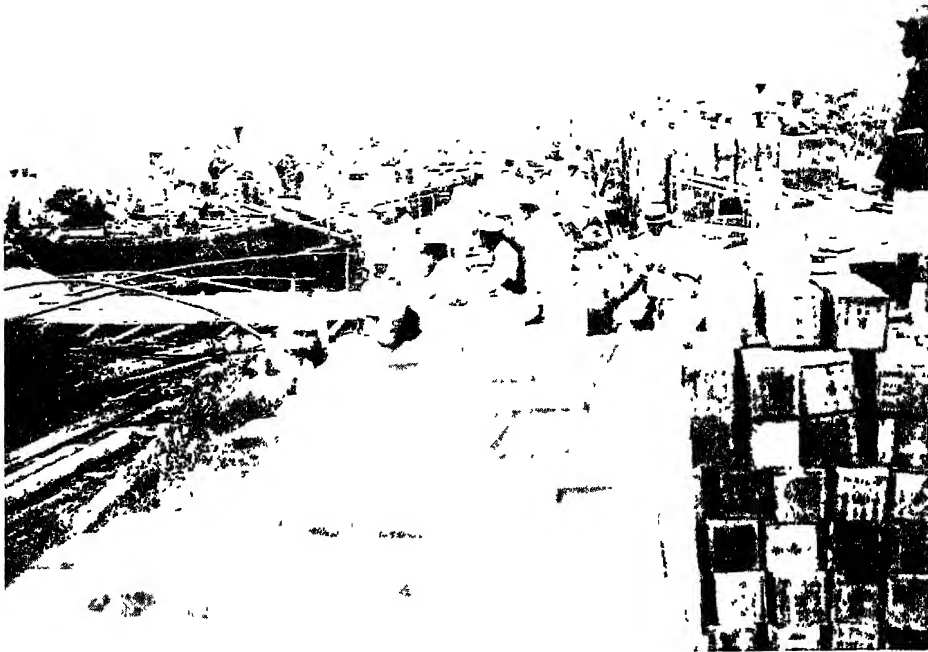
The statue of Masashige Kusunoki, at the outer precincts of the Imperial Palace. Sufferers, putting so many paper notes on both the statues, hoped to make their relatives and friends know their safety and their temporary addresses, in the time of a great confusion



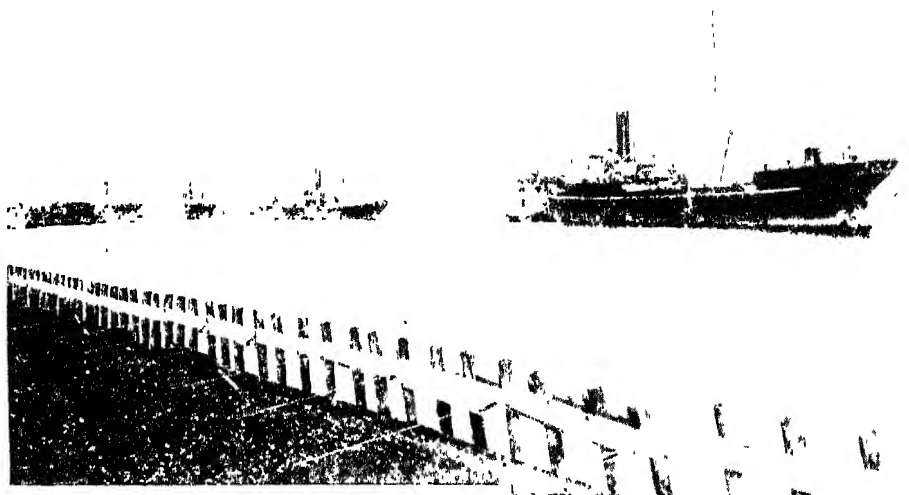
The statue of Takamori Saigo, at Ueno Park



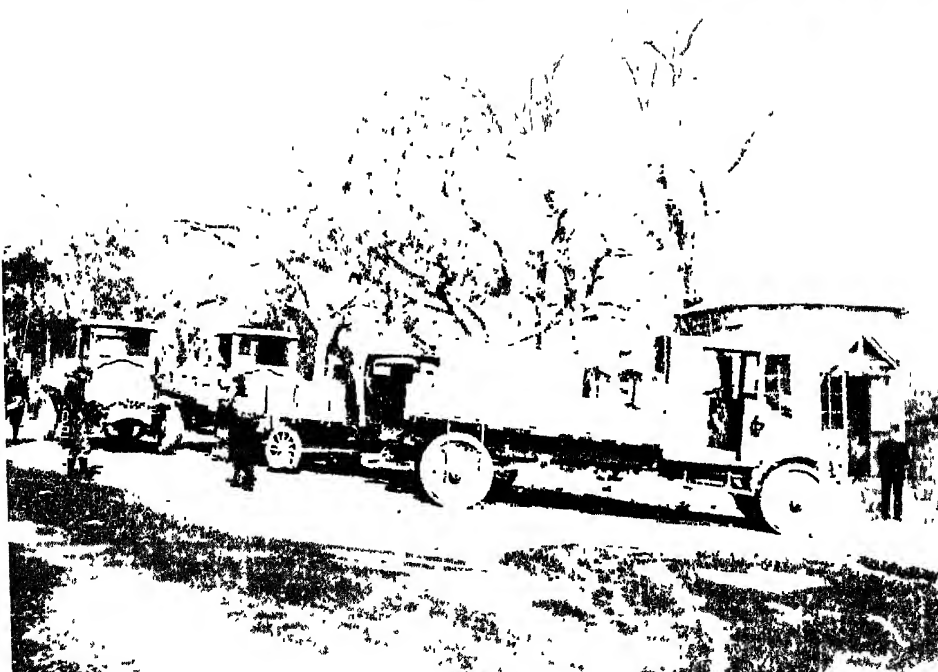
A horse-cart used for traffic organ, in stead of street tramway service



Earthquake relief materials  
arrived at Shibaura,  
Tokyo Bay



Ships and warships gathered  
at Shibaura for relief of  
sufferers



"Temporary Moving Markets" of the Tokyo Municipal Office

now confronting them. The following is a rough translation of the said proclamation:

"The calamity which has overwhelmed the City, is dual in nature; an appalling earthquake and a great conflagration in its wake. The flames spread over fourteen wards and destroyed some 411,000 houses, in consequence of which over 1,547,000 persons were burnt out of house and home, besides tens of thousands of unfortunate people who were injured or lost their lives in the catastrophe. In fact, about half of the whole area of the City of Tokyo has thus been turned, in a moment, into a veritable desert of smouldering embers and ashes.

His Imperial Majesty the Emperor, filled with great solicitude at this calamity of unparalleled severity, was graciously pleased to grant monetary gifts out of the Privy Purse for relief of the suffering people and also to command the Government authorities to leave nothing undone in providing for the relief of the people suffering from the calamitous occurrence. Furthermore, the Emperor was pleased to issue an Imperial Edict, wherein His Majesty laid down the general principle which should serve to guide the people in their conduct at this time of overwhelming disaster. The Imperial Wish embodied in the Edict is that we should face the present extraordinary emergency with great resolution and judicious discretion; and, in devising measures for permanent restoration, proper judgment should be exercised, that what is of less urgent nature may not be mistaken for what is more imperious in character, and *vice versa*; that the plans for restoration should not be content with merely embracing the previous limits of the Capital, as it is highly desirable that due regard be had to the future development of the City, so that thoroughly new features may be introduced into its general appearance; and further, that special organs should be provided for the satisfactory functioning of civic life; in short, there should be nothing omitted that could be desired, either in the plans for the promotion of municipal prosperity or in the measures for efficient management of municipal business. When we, citizens of Tokyo, read the Imperial Edict, we cannot but feel within us a deep sense of responsibility, and be moved with unmeasured inspiration by the Imperial injunction and solicitude.

I, the Mayor of Tokyo City, labouring thus under the heavy task of the City's restoration and reconstruction, only strive to make sure that our plans and measures may never be found imperfect or insufficient, always placing my entire reliance, on the one hand, upon the disinterested service and sacrifice of those persons who participate in the municipal administration and legislation, and, on the other, expecting untiring exertion and activity on the part of the officials under my jurisdiction. Fortunately, we are backed up with the universal and whole-hearted sympathy and ungrudging help, both of private individuals and

## THE RECONSTRUCTION OF TOKYO

official bodies. Thanks to such nation-wide co-operation and aid, the people of the afflicted districts are not reduced to a state of quite utter destitution in the matter of provisions or other means of life's subsistence, so that the people are daily subsiding into calmness and stability, while the various measures devised for amelioration are to be put into actual execution by proper stages, to see which sincerely fills me with delight and satisfaction. But since it is by a natural disaster of unexampled destructive power that we have been overtaken, the task of restoration and resurrection is nowise easily realizable. Even by putting forth all our energies, in obedience to the spirit of the Imperial injunction, I apprehend that we may possibly not be equal to the work with which we are laden.

Therefore, it is my earnest wish that you, citizens of Tokyo, will piously take to heart the solemn lessons of the present visitation; act in temperance and propriety, never disturbing peace and order; constantly keep alive within you the spirit befitting citizens of a great City, by exercising self-respect and self-reliance; and, be stirring yourselves with the utmost resolve and determination, fully display the spirit of self-government; and, acting in perfect concert and co-operation, both publicly and privately, try to attain the great object in view, and hand down the beautiful fruit of our exertion to posterity, thus fulfilling in full measure the Imperial Desire as contained in the Imperial Edict granted us on this occasion."

*HIDEJIRO NAGATA*

Mayor of Tokyo

September 15, the 12th year of Taisho.

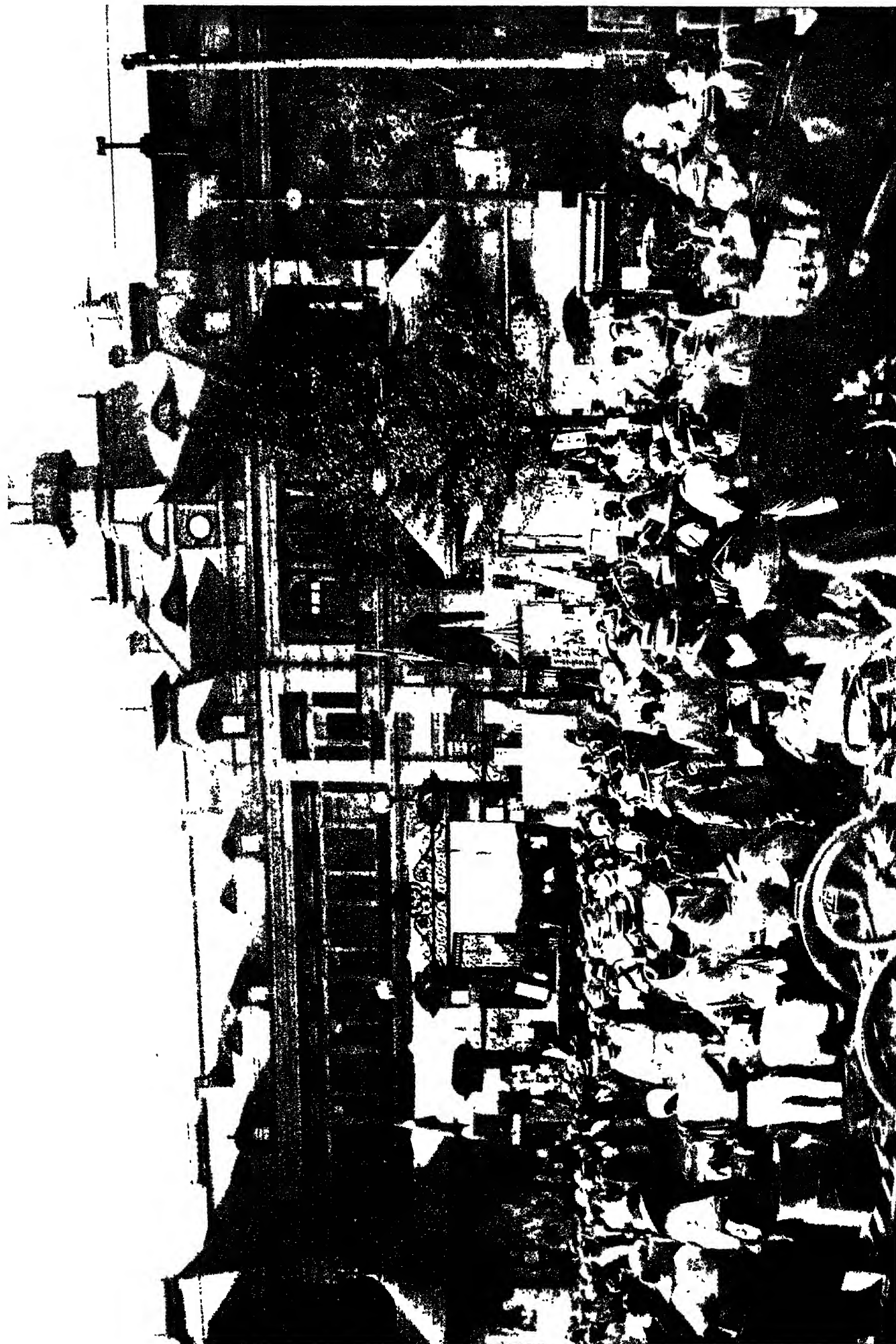
## SECTION IV

### EMERGENCY MEASURES TAKEN BY THE CITY OF TOKYO

#### 1. The Municipal Assembly

On September 4, immediately after the occurrence of the Earthquake calamity, the Municipal Assembly of Tokyo held a meeting of its members for conference as to the measures to be taken for coping with the disastrous effects of the occurrence; and, as the result of deliberation, it was decided that all emergency measures and arrangements required by the circumstances should be left to the judgment and discretion of the municipal authorities, and that each of the members of the Assembly should endeavour to ensure smooth and perfect relations in the dispatch of the relief business, between the Municipal Office, on the one hand, and the Ward Office of his constituency, on the other, while participating, in a general way, in the work of relieving the earthquake sufferers at large. On the following day, 5 of September, the mayor ap-





Crowd of sufferers in front of the Tokyo Municipal Office





Departure of sufferers from the Metropole by railroad, Nippori Station



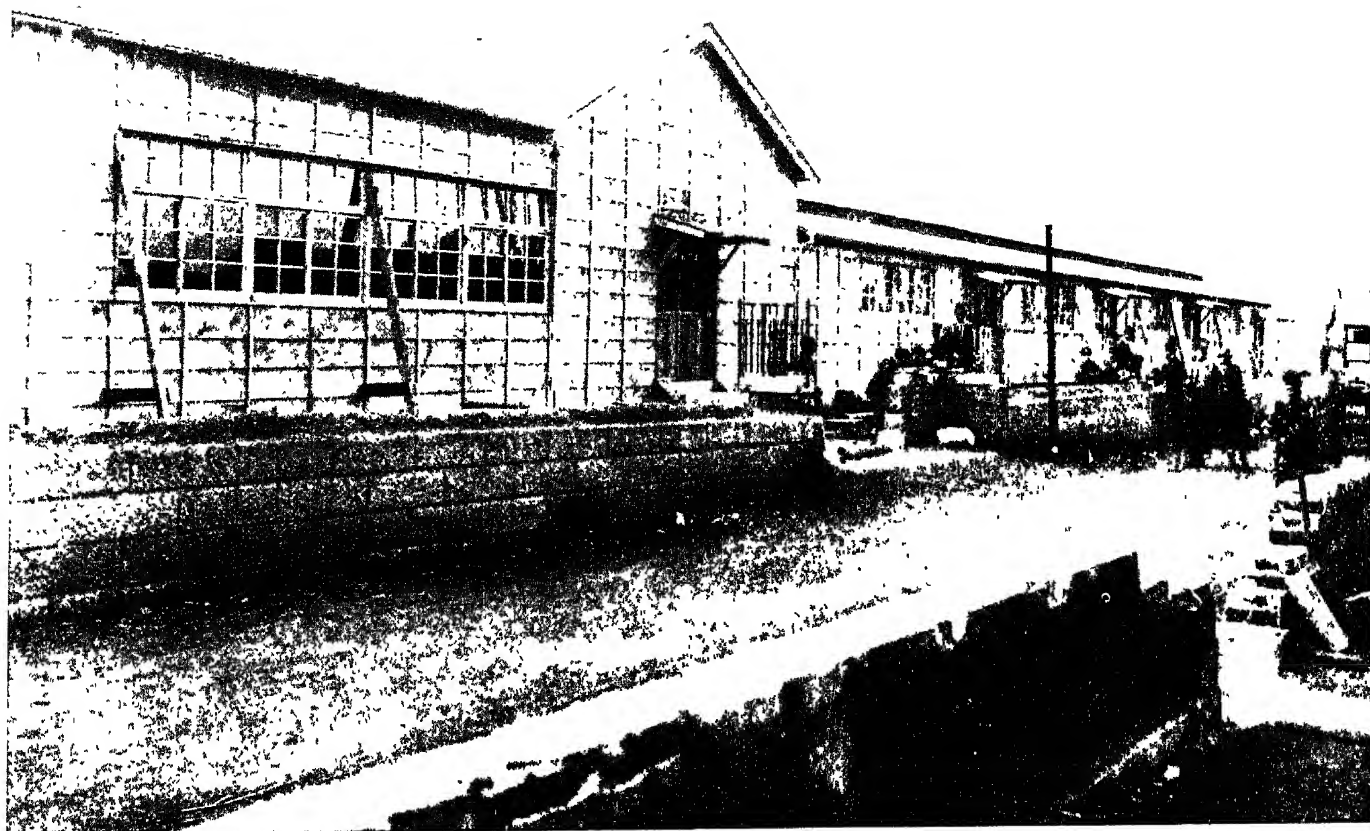
Earthquake refugees on boad from Shibaura



**Camping of sufferers and the temporary medical relief station of the Japan Red Cross Society, at the outer precincts of the Imperial Palace**



**"Barrack Shanties" in front of Yasukuni Shrine**



A "Barrack School"



School teaching in the "Barrack School"

pointed a special committee to deal with affairs connected with the relief of the people suffering from the earthquake disaster. On 15 of the same month, a conference was called of the members of the Assembly, when an executive committee was appointed, for the purpose of framing emergency plans and measures to combat the disastrous consequences of the earthquake, as well as plans for permanent restoration. The members of the committee were divided into three sections, and to each of them was assigned its special duty to be discharged as follows:

Section 1 (consisting of 22 members)	...	Affairs relating to fire insurance, banking and monetary business.
Section 2 ( " 30 " )	...	Affairs connected with the daily necessities of subsistence and the relief of sufferers from the disaster.
Section 3 ( " 30 " )	...	Affairs relating to adjustment of the fire-devastated areas as well as the work of restoration in general.

At subsequent meetings of the Municipal Assembly, that is, those held on 6, 18 and 22 of October, and on 13 of November, as well as on 3 and 25 of December, a Budget for emergency measures and arrangements was voted and passed *nem-con*.

2. Tokyo City's financing of the emergency expenditures and the establishment of special municipal finance for the execution of emergency measures in connection with the Earthquake Disaster.

In the disturbed days immediately following the Earthquake disaster, the Mayor of Tokyo, as an extraordinary step necessitated by the emergency, decided to order, on his own responsibility, the defrayment of emergency relief expense and water supply expenditure; and so on September 12, it was publicly announced that a sum of 1,000,000 yen had been included in the supplementary Budget of Revenue and Expenditure of the City of Tokyo for the fiscal year of 1923.

The financial source for this disbursement, however, was nowhere to be found except in a loan from the Finance Department; for the greater portion of the Municipal Budget already in existence had been converted into a *dépôt* account of fixed term; and, moreover, this banking arrangement could not now be altered immediately, as the inevitable consequence of the operation of the Imperial Ordinance ordaining a "moratorium." Accordingly, the Mayor of

## THE RECONSTRUCTION OF TOKYO

Tokyo was compelled to turn to the Finance Department for help; and hence on September 10, he was able to get from that Department a temporary loan of five million yen, to tide over this financial difficulty. On October 4, the mayor duly notified the President of the Municipal Assembly about this financial arrangement.

On the other hand, the Municipal Council, on behalf of the City Assembly, passed a Supplementary Budget covering expenditures for the emergency provision for the City electric tramway system, the adjustment of roads and ways in districts which had been swept by the earthquake conflagration, as well as monetary aid for the construction of temporary buildings for elementary schools and the repair of existing school-houses as was urgently necessitated, and so on. On October 4, the Mayor as in the case described above, took due steps to notify the President of the Municipal Assembly of this fact. The details of the Supplementary Budget were as follows:

Expenditure for enterprises connected with the City water supply . . . . .	¥1,000,000
Expenditure for enterprises connected with the City electric tramways . . . . .	¥4,373,000

(This meant expenses required for emergency measures taken in connection with the damage suffered by the City electric tramway system in consequence of the great Earthquake)

Expenditures belonging to municipal finance:

Expenditures for execution of emergency measures . . . . ¥1,000,000  
(Expenses for relief work)

Expenditures for execution of emergency measures . . . . ¥975,000  
(Expenses for carting away ashes and debris from the fire-destroyed areas, for facilitating the adjustment of roads and ways)

Expenditures for execution of emergency measures . . . . ¥3,151,436  
(Expenses for construction of temporary buildings for elementary schools destroyed by the earthquake fires, etc.)

On October 18, the Municipal Assembly held its second meeting after the great Earthquake, when the "Expenditure for the Restoration Undertakings necessitated by the Earthquake" was consolidated into an extraordinary or special account in the Municipal Budget; and this, together with the expenditure for execution of the emergency measures to cope with the effects of the earthquake calamity and for reconstruction and restoration, all of which had hitherto been included in the fixed Budget belonging to the Municipal Finance, now came to be adjusted and transformed into a special item in the regular municipal

# ARRANGEMENTS AND MEASURES FOR EARTHQUAKE RELIEF

finance. In passing, we may add that this "extraordinary or special account," of which mention was made above, was abolished in February, 1925.

Since then, necessitated by the shifting of circumstances, repeated alterations and amendments were effected in the Budget. Below are particulars of the Estimates and the actual Expenditures effected, for the fiscal year of 1924, with exclusive emphasis on those items bearing on the measures and enterprises connected with the Earthquake disaster.

## Earthquake Welfare Expenditures for the Fiscal Year of 1923

	(Estimates)	(Actual Expenditure)
Expenditure necessitated in consequence of the Earthquake . . . . .	¥39,243,488	¥25,139,816.91
Expenditure for relief work in connection with the Earthquake disaster . . .	2,210,000	1,909,192.16
Relief Work . . . . .	2,210,000	1,909,192.16
Emergency arrangements . . . . .	27,851,708	22,005,982.41
In connection with the City Office . . .	825,218	609,661.84
In connection with the Ward Offices . . . . .	493,092	448,049.46
Educational expenditure . . . . .	4,527,792	4,469,078.27
Engineering Works . . . . .	8,852,961	7,473,908.78
Public Sanitation . . . . .	2,281,764	1,957,120.03
Commercial and Industrial Expenditure . . . . .	9,789,828	6,381,160.69
Social Enterprises . . . . .	974,403	571,678.24
Reserve Fund . . . . .	218,000	32,911.41
Municipal Loans . . . . .	183,708	216,619.41
The expenditure for the Reconstruction of the capital, to be effected in a number of years: the disbursement allotted for the current fiscal year . . . . .	3,050,000	965,778.68
Expenditure for the repair and construction of roads and ways as well as that for readjustment of land, to be effected in a number of years . . . . .	2,139,000	30,341.52
Expenditure for construction of a branch of the Central Wholesale Market, to be effected in a number of years; disbursement allotted for the current fiscal year . .	3,500,000	—



## THE RECONSTRUCTION OF TOKYO

Subvention granted in connection with contracts for engineering works and supplies, to be ef- fected in a number of years . .	91,072	11,902.73
City Water Supply Work . . . . .	2,300,000	1,814,002.84
Electric Enterprises . . . . .	8,591,000	7,402,205.15
Arrangements for supply of electric power . . . . .	1,708,000	992,897.35
Maintenance of City Workhouse . . . . .	88,800	59,136.74

### 3. Special Organs for Emergency Measures

On October 12, the Tokyo Municipal Office announced the creation of the following five new organs for managing the different branches of affairs pertaining to the work of restoration:

- (1) General Affairs,
- (2) Relief Work,
- (3) Engineering Work,
- (4) Electricity,
- (5) Accounts.

1. General Affairs Section: As the first thing, this section decided the fundamental policies to be followed in the execution and management of the relief work to be conducted in the different wards and districts under municipal jurisdiction, as well as the general measures to be taken for relieving sufferers from the Earthquake Disaster. On the other hand, it was not at all inactive in conducting useful basic investigations on the strength of data and materials collected in various quarters and directions, the final results of which it furnished to the Government authorities and other parties interested, in order to serve as materials for reference. We briefly mention below the more important of its activities.

(1) On September 2, at 1 a.m., the said Section took steps for accommodating a portion of the tumultuous crowd of earthquake-driven people in the wide space in front of the City Hall, thus lessening the great confusion and disorder then universally prevalent.

(2) By the special care of this Section, indication was given at various important spots in the City, for the benefit of the afflicted general public, of the exact situation of the places for refuge, free food-providing booths, drinking-water taps, as well as the temporary stations for medical aid.

(3) As the unrestricted influx of a large number of people from the provinces, who came flocking to the Capital immediately after the Earthquake, for the purpose of seeing their relatives and friends, or otherwise, was likely to

affect the earthquake-sufferers and refugees in an undesirable way, in the matter of necessary provisions and housing, and also in connection with the convenience of transit and communications in general, the said Section presented a petition, on September 7, both to the Home Minister and the Commandant for the Enforcement of Martial Law in the Kwanto Districts, to the effect that steps be taken to ask the Prefectural Governors and other parties concerned to prevent such people, as far as practicable, from coming up to Tokyo, if not for long, at least for the time being, that the prevailing confusion might not be made worse; at the same time, to provide for the speedy recovery of railway traffic to its normal state of operation and to devise measures for satisfactory transportation by water, by enhancing the efficiency of the transit services, thus, on the one hand, enabling the suffering people of Tokyo easily and promptly to leave the City and seek refuge in the provinces and, on the other hand, relieving the congestion of people everywhere found swarming and harding within the City.

(4) The proper disposal of the bodies of the unfortunate victims of the Earthquake and Fire; the business connected with free provision of food to the famishing sufferers; the selling of foodstuffs; the distribution of "relief rice"; the management of the hutments for the accommodation of houseless sufferers; the affairs in connection with education; the agreement and understanding on the subject of the unification of labourers' wages—these were all embraced within the sphere of activity of the above Section, which did its best to keep in close touch with the different quarters concerned.

(5) In order to facilitate the work of relief and also to make perfect connection with the various quarters interested, the said Section made an investigation of the actual condition of the management of divers branches of business connected with the Earthquake Disaster, the results of which were immediately communicated to the different Government bureaux and newspaper offices.

(6) On October 19, a memorial service, on a great scale, was held chiefly through the assistance of this Section, under joint auspices of the Prefecture and the Municipality of Tokyo, at the old site of the Army Clothing Dépôt, Honjo ward, where forty thousand unfortunate refugees were overwhelmed by the fire. This service was for the repose of the souls of the thousands who had lost their lives in the Disaster of September 1.

(7) In thanks for the sympathy shown, (a) Telegrams were despatched to all parties, both at home and abroad, for their kind condolence on the occasion of the calamity. Immediately after the occurrence of the Earthquake, telegrams of enquiry and sincere sympathy were received from all quarters of



the earth, for which thanks were duly returned, in a proper way, by the Mayor of the City. (b) On November 11, in conjunction with the Tokyo Chamber of Commerce, the Japan League for Peace, as well as various newspapers in the Capital, the City held a mass meeting for a Peace Memorial, at Hibiya Park, asking the presence thereat of the Ambassadors and Ministers of the different powers accredited to this country, when thanks were formally and publicly tendered for the sympathetic help and co-operation extended to us on the occasion of our national calamity.

(8) The publication was started of a bulletin named "Information Concerning Relief Work at the Time of the Extraordinary Disaster," aiming at satisfactory co-operation and concerned effort in the work of relief. The first edition "A" made its début on September 7 and came to an end, with No. 167, on January 20, 1924; while "B" edition made its first appearance also on September 7 and closed its career on December 2, 1923. Besides, the same Section managed the issue of a publication entitled "A Journal of Investigation of the Disastrous Consequences of the Earthquake in Tokyo City," which was distributed to the different Government bureaux, official establishments, ward offices, newspaper offices, and other public and private bodies interested.

(9) In April, 1925, there was published a compilation called "A Record of the Earthquake Disaster in Tokyo, in the Era of Taisho," which was intended to be an authorized description of the Earthquake Disaster, specially and officially compiled by the Municipality of Tokyo.

(10) A Plan was formed definitively for the construction of a memorial hall at the former site of the Military Clothing Dépôt, at Yokoamicho, Honjo ward, in memory of the national calamity of September 1.

2. Relief Work Section: This Section was particularly conspicuous in its activities in business connected with supply of the urgent necessities of daily life, the arrangements for affording help to those who were seeking refuge from the Earthquake Disaster, as well as a variety of matters relating to public hygiene, education, the providing of work for those without employment, and so on. These activities, may be said, without exaggeration, to have constituted practically the whole of the arrangements in the earlier post-Earthquake days, devised for the relief of the distressed. We shall try in the following paragraphs, to give a brief description of some of the more important work accomplished by the activity of this Section.

(1) In the matter of the supply of foodstuffs and provisions, the Home Department established in this section a special new organ which was called "Bureau for Relief Affairs"; and all supplies, which were secured and collected

as really indispensable for daily subsistence, were handed over to the Army authorities for proper distribution among the suffering people. The officials of the Municipal Office and the different ward offices under its jurisdiction, who were specially charged with this business, undertook the actual distribution of these staples of urgent necessity. Later, as the confusion gradually subsided, and a state of order was restored, this system of free distribution of provisions was gradually discontinued, except to those who were helplessly poor and destitute. and, in its stead, that of selling at reasonable prices was introduced by judicious degrees.

(2) The actual free distribution of clothing and other things of daily necessity was first commenced on September 24. On the first emergency from the state of great confusion and disorder, however, which marked the earlier post-Earthquake days, the Municipal authorities deemed it reasonable to sell foodstuffs and other essential staples at moderate prices to those comparatively well-to-do people who could well afford to meet payment of the prices. Accordingly, the Municipality took upon itself only the business of supplying things and articles to the Municipal Markets, with due indication of the prices, while the duty of actual sale fell to the markets. On the other hand, the different wards within the City opened temporary selling places at elementary schools or other convenient places deemed suitable, and there undertook the sale, at reasonable prices, chiefly of rice, the principal staple food of the Japanese people. Furthermore, the arrangements or scope of the markets already in existence and operation, was temporarily widened, in order to meet emergency requirements, thus hoping to contribute to the restoration of peace and order.

(3) Soon upon the outbreak of the Earthquake disaster, crowds of people flocked to public parks, squares, and other spacious places, for the purpose of seeking refuge and shelter from the destructive convulsions of nature. Not long after, however, the greater part of such refugees dispersed, as they chose to go away, in order to get help from their relations and friends; but those who had no friends or acquaintances to turn to for aid, had to stay behind and be cared for by the authorities. Accordingly, as an emergency measure, official and public buildings, schools, temples, or, in some cases, even the residences of wealthy people, were utilized for the purpose of accommodating houseless sufferers, while for those who were still obliged to remain in the open, tents were pitched at convenient spots for their accommodation. Thus at any rate, the pressing need of the moment was met to some extent. Later, rows of barracks, that is improvised, temporary, shanties, were put up for the benefit of these wretched people. Particulars about these hutments and the people accommodated there, are given below:

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Situation of hutments	Beginning dates of accommodation	Number of people accommodated, to December 20, 1923
Hibiya Park . . . . .	September 14	6,130
Outer Precincts, Meiji Shrine . . . .	" 8	7,209
Kudan . . . . .	September 16	2,800
Ueno Park . . . . .	" 16	5,134
Shiba Detached Palace Garden . . .	" 18	9,977
Shiba Park . . . . .	" 7	6,501
Kojimachi ward . . . . .	October 10	391
Kanda ward . . . . .	" 6	2,509
Nihonbashi ward . . . . .	" 1	3,269
Kyobashi ward . . . . .	" 11	1,767
Shiba ward . . . . .	" 3	520
Yotsuya ward . . . . .	September 10	1,146
Koishikawa ward . . . . .	October 4	2,198
Hongo ward . . . . .	" 8	808
Shitaya ward . . . . .	" 11	429
Honjo ward . . . . .	" 1	5,947
Fukagawa ward . . . . .	" 5	4,399

(4) The unclaimed remains of unidentified victims of the Earthquake and Fire were gathered and deposited at various convenient places within the City, and due public notification thereanent was made in a proper way, for the sake of the general public, with the indications of the period of safe deposit and the way of cremation. On the other side, the City authorities did not neglect to devote attention and effort to the arduous task of disposing of the heaps of dirt and wreckage still left on the devastated areas, to the serious obstruction of speedy restoration of normal traffic and communication. Therefore, for this purpose, carts and waggons, as well as motor-trucks, were put under requisition, with the help of which the City "clearing forces," organized into several detachments under able direction, and with their respective objectives definitely indicated, set about the task in dead earnest, in harmonious concert with the ward officials, so that, already by the middle of September, practically the whole of the City districts had been cleared of these unsightly masses of dirt and rubbish. Again, the authorities also turned attention to the extension of the Municipal Infection Disease Hospital and the Tuberculosis Sanatorium; further, they got up a number of ambulant disinfecting corps, which, in co-operation with the Metropolitan Police, addressed themselves to the troublesome work of disinfection within the City. Furthermore, temporary vaccination stations were opened at seventy different places, where those

who received precautionary inoculation reached two-thirds of the entire inhabitants of the City.

(5) As was already mentioned, the greater portion of the primary schools within the City were consumed by the Conflagration, and so their normal operation was perforced to suspend for some time. By the middle of September, however, their former sites were all cleared of the débris and ashes, so that they at once resumed teaching work outdoors, popularly known as "*Roten-gakko*," this is, "outdoor schools," a name highly redolent of the after-odour of the Earthquake calamity. In the middle of November, part of the tents donated by American sympathy and goodwill were distributed,—a welcome and timely present, at once utilized for the purpose of improvising school-houses, where children were taught in two separate sections, morning classes and afternoon classes. Afterward, however, when the "temporary" school-buildings were completed these "tent schools" were closed and the children were accommodated in the "temporary" school-houses. We may note, *en passant*, that those primary schools which were fortunate enough to escape destruction by fire were again ready to resume teaching already in October. As a preliminary step for this purpose, therefore, they transferred those people who were still seeking refuge there to some other convenient places; and after subjecting all the school-houses to thorough cleaning and disinfection, with repairs, if need be, they pronounced them fit for resumption of their proper function.

(6) Of the nine Municipal employment agencies, six were destroyed by the earthquake fire; and of the three surviving agencies, one was temporarily closed, on account of the situation being inconvenient and also not too easy of access. However, the volume of the unemployed within the City, as well as in the neighbouring districts, swelled markedly after the Earthquake Disaster, so much so, indeed, that the figures once soared to 96,103 which, when classified according to the kinds of occupation they had previously engaged in, may be distributed as follows:

Industry and Mining . . . . .	35,132
Trade and Commerce . . . . .	24,627
Miscellaneous . . . . .	13,361
Communication and Transportation . . . . .	2,629
Civil Engineering and Construction . . . . .	1,793

Now, the number of the unemployed found within the City was as follows (November 15, 1923):

Total . . . . .	68,866
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Male . . . . .	49,372
Female . . . . .	19,494

Urged by this state of affairs, the municipal authorities opened, on September 2, at Ote-machi, Kojimachi ward, two temporary offices for transacting business connected with various kinds of affairs of personal character, of which the chief ones are as follows:

- (1) Matters concerning fire and life insurance.
- (2) Matters relating to houses and buildings.
- (3) Counsel sought as to the advisability of returning to one's native place.
- (4) Matters connected with the search for persons lost, and missing children.

To further increase the efficiency of these arrangements, the authorities contrived to put up still more temporary employment agencies at several important spots within the City, with the help of twenty tents specially loaned by the military authorities. Later, at the expense of the State, "barrack" offices were established at fifteen different places, where employment information business was conducted.

3. Engineering Work Section: As the more important and conspicuous activities of the Engineering Work, may be mentioned the speedy restoration of the means of communication by land and water, which stands especially prominent on the list; the quick repair of the sewerage systems, and the City water supply arrangements, the adjustment of the fire-swept districts, the measures taken in regard to those public parks destroyed or demolished by the fire, and so on. We shall devote a few paragraphs below to a brief description of the share borne by this Section in the extensive programme of the great Work of Reconstruction.

(1) Bridges—The total number of bridges within the City, which were consumed by the flames is given as 356; and the repair or rebuilding of these bridges was effected only with the help and assistance of the military engineering corps. The work was commenced on September 4, and by the end of March of the next year, that is, 1924, the entire work of repair and reconstruction, as originally scheduled, was practically brought to completion.

(2) Roads and Ways—The work of adjusting roads and ways after the Earthquake was chiefly accomplished with the aid of the military engineering corps and the local young men's associations. By 20 of October, this onerous task was wellnigh finished.

(3) Clearing the Watercourses—Soon after the occurrence of the

calamity, the authorities set about the work of clearing and dredging the rivers and creeks within the City. By the opening of October, however, as many as sixteen principal rivers and canals had been fairly cleared of the choking obstacles and impediments, and rendered navigable.

(4) Water Supply Arrangements—Quickly upon the outbreak of the calamity, the authorities concerned, with judicious precaution and decision, cut off the supply of water, in view of the probable damage to the watercourse; but from 3 of September on, they managed to reopen the supply of water, as an emergency step, to those low-lying quarters where the damage to water-mains were found fortunately not so serious. At that time, the quantity of water still remaining in the subsiding and purifying reservoirs amounted to about 364,526.80 cubic metres. The days from 3 till 15 of September were consumed in the urgent repair of pumping appliances and water pipes and mains. By the beginning of October, however, the normal condition was fairly restored, except for a portion of the up-town of the City. But December saw the complete restoration of the water supply to its former efficiency.

(5) The Sewerage Systems—The emergency repair work on the City sewerage systems was started on September 18, 1923; and by the end of March in the next year, practically the whole of the ramifying sewerage systems within the City had undergone the temporary process of repairing.

(6) Public Parks—Besides the direct damage arising from the Earthquake and Fire, all Public Parks in the City had suffered considerable injury from refugees who flocked there to seek shelter from the disaster. The municipal authorities concerned commenced the work of restoration in those parks which had survived the calamity with comparatively slight injury. However, the progress of their task was not so easy and quick as they could desire; for the parks were, most of them, still encumbered with ubiquitous "barrack" sheds specially put up for refugee accommodation; so, it was only a small portion which presented relatively little hindrance, that were subjected to a process of restoration at the hands of the City authorities.

4. Electricity Section: The restoration of the normal tramway service and the satisfactory supply of electric power for lighting purposes, the repair or rebuilding of structures needed for the operation of electric enterprises, the inauguration of the motor-bus service, as auxiliary to the City electric tramway service, which had been greatly deranged in consequence of the Earthquake: these were, indeed, some of the principal activities which distinguished the Section of Electricity immediately after the occurrence of the disaster. We mention below, at some length, these activities under separate heads.

(1) The rehabilitation of normal operation of the City tramway service: The Earthquake Disaster threw out of gear almost the whole system of the City tramway service; but in some parts of the up-town districts where, as is still fresh in memory, the damage was relatively slight, the network of electric cables, the tramway tracks, bridges and all other necessary appurtenances of tramway enterprises fortunately remained practically intact and serviceable for immediate use. In these sections of the tramway system, together with the main trunk lines, the authorities determined to start the intended restoration of the City electric tramways. With this project in view, on September 5, they made a trial operation at the transforming station, at Komagome, Hongo ward, and found the results altogether satisfactory. Encouraged by this success, they resumed on the following day, September 6, the running of the cars between Shimmei-cho Shako-maye and Ueno Mihashi. Indeed, this section was the very first of the entire system to operate after the Earthquake. Thereafter, the restoration work progressed gradually in different sections and quarters of the City, till at length the beginning of June, next year, saw complete restoration of the whole tramway system to full and efficient operation as in the pre-Earthquake days.

(2) Free transit service by tramways: As an emergency step, "free transit service" was temporarily offered to the general public from the time when resumption of tramway operation was announced, on September 6, between Shimmei-cho Shako-maye and Ueno Mihashi. But people who wished to avail themselves of this generosity offered by the authorities, were so overwhelmingly numerous as to cause, in fact, some apprehension of serious danger; so that, on September 17, this "free transit" privilege was withdrawn and, instead, provisional rates were specially fixed and put into practice. This arrangement, however, was again changed on September 19, as the result of deliberation by the Municipal Council, which held a sitting on that date; and it was decided that from 25 of the same month, the ordinary fares should be again operative.

(3) Urgent measures taken in connection with electric transforming stations and rolling stock:

(a) Electric transforming stations—On September 4, the first supply of electricity was received. On 6, a trial operation was conducted at the electric transforming station at Komagome. By the beginning of February in the next year all transforming stations within the City were again in normal operation.

(b) Rolling stock—As to the cars used on the City tramway lines, it was decided to purchase ten old cars from the Han-shin Electric Railway Co., in



order to meet the pressing requirements of the moment. At the same time, they at once gave orders to several car manufacturing companies for the construction and supply of a large number of cars, so that by the end of April in the next year, the City tramway system stood fully equipped with as many as 1478 cars.

(4) Repair of tracks, bridges and road surfaces: Soon after the outbreak of the calamity, the authorities organized parties of experts, for the express purpose of making investigation of the actual damage suffered by the tramway tracks. As the initial step, they caused the skeletons of wrecked electric cars, still standing abandoned on the tracks, and other impediments and obstructions, to be cleared and removed; then they decided the lines on which to recommence the operation of normal traffic, which, in turn, necessitated prompt repair or restoration of the demolished tracks and bridges. As to the re-making of road-surfaces, as well as of the tramway tracks, we may state that at nineteen places, roads and ways were subjected to a process of relaying, while the total mileage of tramway track repaired or rebuilt reached over twenty miles. In passing, it may be added that in the execution of all this repair work, substantial assistance was always offered by the military authorities. Besides, all the network of electric cables for conveying electricity for various purposes suffered more or less injury; but as it was, in most cases, relatively slight and easily mended, the task of restoration proved a matter of only a few days.

(5) Restoration of electric lighting and illumination: Restoration of electric lighting service soon followed. On the night of September 4 the hearts of the inhabitants of those districts which survived the calamity practically with immunity were gladdened with the impatiently longed for restoration of electric illumination, all the more welcome, as they had been obliged to content themselves, for some few nights, with the long-discarded primitive type of lighting appliances. At first, the needed electricity was supplied from the transforming station at Koishikawa. Almost the whole of Koishikawa ward, a part of Ushigome, Yotsuya and Hongo got the benefit of this arrangement; and at first, it was mainly utilized for the convenience of policing and relief work. Only, owing to insufficient supply of electric power, it was at first restricted to a single electric lamp to a single family, the power of a lamp being also limited to ten-candle light or less.

On September 5, the supply of electricity was increased and, in consequence, the electrically lighted area was extended accordingly, the remaining portion of Yotsuya ward, Kojimachi and Akasaka wards, as well as a section of Sendagaya, a suburban district of Tokyo, being embraced within the circle



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of electric illumination. At the same time, they recommenced partial supply of electric motive power, during the daytime, for utilization in rice hulling and polishing. Again, from 7 to 9 of September, in the said area the supply of electricity was further extended, in consequence of increase in the volume of electricity supplied. On September 29, the day-and-night supply of electricity was at last completely restored. On 13 of the same month, the pitch-dark nights in the fire-destroyed areas came to be cheered with dazzling light, to the joy of the inmates of those "barrack" dwellings studding the earthquake-and-fire-devastated districts. The work of supply and installation of electric lighting was pushed on, day and night, tirelessly and unceasingly, so that on October 20, the total number of houses, and electric lamps thus installed, reached 8,833 and 20,198 respectively. By the close of April, 1924, the state of the supply of electricity was as described in the following table. In fact, the total amount of the electric rates paid in for the month of April footed up to 472,607.04 yen.

Kinds of electric power supplied	Before the Earthquake	Consumed by the Fire	Actual state, April 30, 1924
Electric lamps . . . . .	<div style="display: inline-block; vertical-align: middle;"> <div style="font-size: 3em; vertical-align: middle;">{</div> <div> 130,500 houses  721,910 lamps </div> </div>	<div style="display: inline-block; vertical-align: middle;"> <div style="font-size: 3em; vertical-align: middle;">{</div> <div> 18,000 houses  154,792 lamps </div> </div>	<div style="display: inline-block; vertical-align: middle;"> <div style="font-size: 3em; vertical-align: middle;">{</div> <div> 131,348 houses  691,636 lamps </div> </div>
Electric power . . . . .	<div style="display: inline-block; vertical-align: middle;"> <div style="font-size: 3em; vertical-align: middle;">{</div> <div> 2,940 houses  26,390 h.p. </div> </div>	<div style="display: inline-block; vertical-align: middle;"> <div style="font-size: 3em; vertical-align: middle;">{</div> <div> 540 houses  9,100 h.p. </div> </div>	<div style="display: inline-block; vertical-align: middle;"> <div style="font-size: 3em; vertical-align: middle;">{</div> <div> 3,540 houses  22,157 h.p. </div> </div>

Further, with the gradual advance of the work of restoring electric lighting arrangements, the repair and refitting of impaired underground transmitting cable systems, installation wire routes, as well as the deranged transforming stations, also made steady progress towards completion.

(6) Simultaneous management of motor-bus service: As already mentioned, quite a large number of electric cars had been destroyed in the fires coming in the wake of the Earthquake, in consequence of which the efficiency of the City tramway service in the days immediately following the Disaster was seriously interrupted, from insufficient equipment in the matter of rolling stock, coupled with the inordinate congestion of traffic resulting from the peculiar circumstances prevailing at the moment. In order to relieve this state of things, the authorities planned the management of a motor-bus service simultaneously with the management of the electric tramway service. For this purpose, therefore, they formulated a Budget embodying the estimated sum of two million yen, which, together with the "Bill for motor-bus service under municipal management" was formally introduced into the City Assembly on October 6, 1923, for deliberation and approval. The

Assembly, after due discussion, voted and passed it, only on condition that it should be made an emergency arrangement to last till full restoration of the electric tramway service to its former efficient condition. Thereupon, a large order was at once given to the Ford Automobile Manufacturing Co. of America, for the manufacture and supply of 1,000 buses, each to seat eleven persons. On the other hand, volunteers, about 1,000 in number, were invited from among the army of motormen already functioning in the City electric tramway service, bus service. These raw recruits, soon of proper training, the new staff of department, Messrs. Sale and Frazar, the Japan Automobile School and the who were to constitute, after a periodation, were divided into several contingents, each placed with the Army Automustered in reponse to the urgent invit chauffeurs to operate the projected bmobile Corps, the Y.M.C.A. motor-car Empire Automobile School, to learn the art and mysteries of automobile manipulation. When the consignment of automobiles arrived from America, Messrs. Sale and Frazar, of Yokohama, were as Motor-bus Service." The memorable 11, 1924, a trial run was made. On 16 of the same month, there was promulgated the "Regulation Concerning theked to put them together. On January inauguration of the new auto-bus service was on 18 of January, when at seven o'clock in the morning the service opened operations with forty-five cars, between Sugamo and Tokyo Station, on the one hand, and between Naka-shibuya and Tokyo Station, on the other. With the passing of time, the service gradually extended its sphere of operations in various directions, till at last, by March 16, the bus service almost covered practically the entire City.

5. Accounting Section: The chief activities of this Section lay in the direction of supplies and labour, as well as the financing and accounting connected with it.

(1) As the inevitable result of the virtual destruction by fire of the greater portion of the City, great difficulty was naturally experienced in the purchase of articles needed in the relief work. Necessity compelled the authorities to turn to the Army for help; and, after repeated negotiations, they were able to obtain from the reserve stock of the Army a partial supply of foodstuffs and medical necessities wherewith to tide over the pressing wants of the moment. On the other hand, the authorities specially despatched men to various distant prefectures such as Tochigi, Saitama, Chiba and Fukushima, not to speak of nearer districts and towns contiguous to the City, with the object of effecting the prompt purchase of necessary articles, with the assistance of the local authorities concerned. Indeed, they left no stone unturned to promote this branch of their activity.

(2) To ensure satisfactory execution of the relief work, they quickly

took steps for the hire of automobiles, boats and vessels, carts, wagons and horses, and other means of conveyance, offers for hire being invited from the general public by means of bills and placards posted up at all important points within the City. As for the supply of labour, the authorities at first, had recourse to the general public invitation for offers, but from September 4 on, they came to utilize the service of the Central Employment Agency.

As the rates of wages paid by the City authorities, as well as the prices fixed and charged for things sold by them, were very likely to be deemed the standard rates and prices, with authority enough to rule the market within the City, thus inevitably exerting a far-reaching influence on all parties interested, close attention was always exercised, using proper judgment and tact in the judicious regulation of prices, in complete co-operation with the Government authorities concerned.

(3) In the turbulent days immediately following the Earthquake disaster, the control of labour and supplies was conducted exclusively on a cash basis. But great trouble was experienced in the management of accounting, as the result, on the one hand, of the destruction by fire of the banking establishment which had hitherto been entrusted with the monetary affairs of the City, and the temporary suspension of business at all banks in general operating within the Capital, on the other. However, on September 11, the municipal treasury became barely able to resume business again; but till that time, the authorities had been really overwhelmed with the incessant efforts to discover ways and means for securing the necessary funds with which to meet cash payment.



Setting up of "Tent Hospitals" donated from U. S. A.



The temporary buildings of St. Ruke Hospital for earthquake relief



Free drinks of milk donated by Dr. C. A. Beard



Sufferers at the Municipal Charity Hospital of Tokyo, built temporarily for earthquake relief



## CHAPTER IV

### Actual State of Relief Work

In the work of relieving the sufferings and privations of the victims of the Earthquake Disaster, we may safely affirm that the entire people of the Empire literally united in assiduous efforts and endeavours, vying with one another to contribute their mite to the execution of the work, or in extending the helping hand of charity to the wretched sufferers. Indeed, one touch of Nature made the whole nation kin; for sympathy and brotherly love were everywhere to the fore, whether in the country or in town, among private individuals or in public bodies, who were, therefore, all absorbed in the common and universal aim of relieving the sufferers. True, both the Government and the general public concerted exertions in getting and distributing the supply of necessities of subsistence, inviting contributions and donations from the general public, or in organizing and dispatching relief parties, and in helping and solacing the homeless refugees famishing in the wide open. On the other side, the different foreign nations were never tardy in expressing their sympathy and friendly benevolence in a material way, which was appreciated gratefully and profoundly, not only by the citizens of Tokyo themselves, but by the general public throughout the country alike. Indeed, in the Message from the Throne, which H. I. H. the Prince Regent read on the occasion of the opening ceremony of the extraordinary session of the Imperial Diet, on December 11, 1923, there was a passage which, when translated, ran roughly as follows:

“It impresses Us especially deeply that at this time of calamity, all friendly nations of the world, too, have shown towards Our people a sincere feeling of helpful sympathy.”

The two Houses of the Imperial Diet, therefore, in clear perception of the Imperial appreciation of the foreign nations' friendly sympathy thus expressed towards us in this national disaster, promptly took steps for returning warm thanks, in their names, for the amicable goodwill and sincere courtesy. Moreover, on the occasion of the Tokyo Citizens' thanks-giving mass-meeting held at the Music Stand, Hibiya Park, on November 11, 1923, the “Peace Memorial Day,” with the object of giving expression to the popular feeling of thankfulness for the helping hand extended to us so freely and liberally by those foreign peoples at the time of the national catastrophe, Mr. Hidejiro Nagata, Mayor of Tokyo, stated in his words of greeting: “We wish to express our thanks for the warm sympathy of the friendly nations.” To this, H. E. Sir Charles Eliot, the then British Ambassador accredited to this country, replied in a highly modest strain, on behalf of the Corps Diplomatique in Tokyo.

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Thereupon, Mr. Raita Fujiyama, Chairman of the Tokyo Chamber of Commerce, rose and said among other things:

"For the profound sympathy expressed and the prompt relief afforded to us by the different friendly nations, on the occasion of the present great national disaster, we, two million citizens of Tokyo, return to them our sincere thanks from the bottom of our hearts." Then, he moved that a resolution should be voted for the formal expression of the Tokyo citizens' sense of gratitude for the foreign assistance and relief. This motion was greeted with deafening applause by the audience, expressive of unanimous approval. Thereupon, after proper procedure, the resolution was duly transmitted to the different nations concerned, through the medium of H. E. the Belgian Ambassador in Tokyo. Indeed, this overwhelming tribulation entirely unprecedented in the annals of this country for the extent and magnitude of the havoc wrought, will remain forever impressed on the mind of the people; but, on the other hand, the beautiful example of humanitarian benevolence and brotherly sympathy, born of the pure feeling of mutual love deep-rooted in mankind, so freely and munificently shown to us by the different foreign peoples on this occasion of our national calamity, will, no doubt, also eternally embellish the pages of the Municipal history of Tokyo.

In the following table, we give details of the substantial expression of sympathy manifested either in the form of money or in kind, on the occasion of the Earthquake Disaster, both by the sympathisers at home and by those abroad:

### TABLE I

#### DONATIONS FROM COLONIES AND OTHERS

Districts	Money donated
Government-General of Korea . . . . .	¥1,916,249
Government-General of Formosa . . . . .	1,277,149
Administration of Kwangtung . . . . .	2,266,870
Administration of Saghalien . . . . .	90,657
Administration of South Sea Islands . . . . .	16,942
Total . . . . .	¥5,567,867

### TABLE II

#### DONATIONS FROM HOME

Prefectures	Money donated
Hokkaido . . . . .	¥ 2,005,300
Tokyo . . . . .	16,891,545
Kyoto . . . . .	2,304,101
Osaka . . . . .	4,585,315
Kanagawa . . . . .	1,851,415
Hyogo . . . . .	2,929,962

# ACTUAL STATE OF RELIEF WORK

Nagasaki	472,439
Niigata	1,344,173
Saitama	341,788
Gunma	352,028
Chiba	996,970
Ibaraki	1,148,818
Tochigi	305,649
Nara	427,193
Mie	1,132,950
Aichi	1,549,894
Shizuoka	343,770
Yamanashi	37,840
Shiga	460,323
Gifu	1,157,174
Nagano	615,551
Miyagi	835,670
Fukushima	322,279
Iwate	408,611
Aomori	1,255,496
Yamagata	453,929
Akita	245,657
Fukui	435,261
Ishikawa	320,500
Toyama	484,536
Tottori	444,573
Shimane	368,071
Okayama	676,437
Hiroshima	1,011,768
Yamaguchi	1,096,656
Wakayama	744,986
Tokushima	298,373
Kagawa	361,343
Ehime	482,230
Kochi	314,399
Fukuoka	1,481,237
Oita	490,753
Saga	558,479
Kumamoto	472,822
Miyazaki	272,791
Kagoshima	369,130



# THE RECONSTRUCTION OF TOKYO

Okinawa . . . . .	98,418
Received at the "Temporary Earthquake Relief Bureau" . . . . .	2,758,691
Total . . . . .	¥58,317,294
Grand Total . . . . .	¥63,885,161

TABLE III  
DONATIONS FROM ABROAD

Countries	Natives	Resident Japanese	Others	Total
Argentina . . . . .	¥ 20,272	¥ 322	¥ 42,557	¥ 63,151
Austria . . . . .	186	—	—	186
Belgium . . . . .	211,997	750	2,049	214,796
Bolivia . . . . .	—	10,685	—	10,685
Brazil . . . . .	1,071	1,396	9,827	12,294
Chile . . . . .	9,231	—	8,647	17,878
China . . . . .	1,052,794	543,601	113,930	1,710,325
Cuba . . . . .	4,469	5,934	—	10,403
Czechoslovakia . . . . .	29,100	—	—	29,100
France and possessions and dependencies . . . . .	268,785	7,006	297	276,088
Germany . . . . .	—	—	15,821	15,821
Great Britain and posses- sions and depend- encies . . . . .	3,830,837	507,535	19,074	4,357,446
Italy . . . . .	41,279	181	—	41,460
Latvia . . . . .	4,368	—	—	4,368
Mexico . . . . .	55,476	154	82,220	137,850
Netherlands and posses- sions and depend- encies . . . . .	357,427	64,164	—	421,591
Norway . . . . .	1,170	—	—	1,170
Panama . . . . .	1,529	2,041	389	3,959
Peru . . . . .	12,615	175,562	188	188,365
Poland . . . . .	6,341	353	—	6,694
Portugal . . . . .	1,472	—	—	1,472
Rumania . . . . .	75	—	—	75
Russian Asia . . . . .	1,000	265	9,320	10,585
Siam . . . . .	43,517	—	18,045	61,562
Spain . . . . .	4,979	—	—	4,979
Sweden . . . . .	56,606	740	—	57,346

# ACTUAL STATE OF RELIEF WORK

Switzerland . . . . .	30,624	—	—	30,624
Turkey . . . . .	194	—	—	194
United States of America and possessions and dependencies . . . . .	12,125,849	2,962,598	40,200	15,128,647
The delegates of the different countries at the Assembly of the League of Nations . . . . .	10,785	—	—	10,785
Total . . . . .	¥18,184,048	¥4,283,287	¥ 362,564	¥22,829,899

TABLE IV  
DONATIONS IN KIND FROM FOREIGN COUNTRIES  
(Estimated values in yen)

Countries	Natives	Resident Japanese	Others	Total
Austria . . . . .	¥ 2,940	¥ —	¥ —	¥ 2,940
Belgium . . . . .	7,000	—	—	7,000
Brazil . . . . .	—	26,600	267,300	293,900
China . . . . .	679,358	190,385	20,717	890,460
France and possessions and dependencies . . . . .	169,406	2,542	—	171,948
Great Britain and possessions and dependencies . . . . .	1,381,863	39,278	—	1,421,141
Italy . . . . .	46,680	—	—	46,680
Netherlands, and possessions and dependencies . . . . .	600	724	—	1,324
Peru . . . . .	—	10,500	—	10,500
Sweden . . . . .	28,650	—	—	28,650
Switzerland . . . . .	4,000	—	30,250	34,250
United States of America and possessions and dependencies . . . . .	15,168,788	627,283	—	15,796,071
The League of Nations . . . . .	10,000	—	—	10,000
(Together with 650 volumes of book to aid in the restoration of libraries).				
Total . . . . .	¥17,499,285	¥ 897,312	¥ 318,267	¥18,714,864

# APPENDIX

## REMINISCENCES

(PUBLISHED IN THE BOOKLET ENTITLED "11.58 A.M.", COMPILED BY  
THE MUNICIPALITY OF TOKYO)

The following is an extract from the "reminiscences" related by Mayor Nagata on the occasion of the anniversary meeting in commemoration of the national calamity held on September 1, 1924....

"Ah! Earthquake!" so crying out, I looked at the ceiling. From the middle of the ceiling a large electric lamp was hanging. Usually, it was still and immobile, but to-day it was seen suddenly to swing to and fro, so violently, indeed, that it might come crashing down. Matsuo-san also turned round and was looking at it in surprise. "The lamp may come down at any moment. It's dangerous; keep close to this side," suggested I. I remained still ensconced in my chair. Instantly and suddenly, however, there came a great noise and confused turmoil from the adjacent rooms. Deputy Mayor Mawatari, whose room was just next to mine, came rushing into my room, saying, "How great an earthquake!" He kept standing. Soon, there came Totoki-san, Chief of the Secretariat Bureau, joining us in the room. "You had better seek safety outdoors, as it's quite dangerous to remain in here thus," urged Totoki-san. Even then, I did not think that it was such a violent and destructive earthquake. "Never mind, Totoki-san, we're yet safe. I fear that the water-supply has possibly suffered. You'll go and ask where may have been the seismic centre," said I to Bureau-Chief Totoki, still calm in mind and inapprehensive of anything untoward. Even at the time of a small earthquake in the autumn three years before, the watercourse for the City water supply had been broken. This bitter experience had been deeply etched on my mind, so that the word earthquake at once called up the idea of the deranged water supply, so inseparable had grown the association between these two things. The earthquake was still on, so that most people apparently had no leisure nor presence of mind to give thought to the matter of water supply, being intent only on the immediate safety of their lives. They were moving about helter-skelter. For the first time up till then, I rose and stepped to the window, and looked outside. From the two-storey building just opposite to the Mayor's room, there were numbers of people issuing hurriedly like a human torrent. The spacious empty ground in front was instantly obliterated

by swarms of refugees; the violent shaking of the ground at last ceased; it was a little calmer now.

While I was looking out of the window, my colleagues had left. Meanwhile, someone,—if my memory is right, Bureau-Chief Totoki—came running in again, and told me to be quick and go downstairs, as there were now none remaining upstairs. Still, I was not really conscious that danger was so imminent as they seemed to think; it was not at all that I merely pretended to be bold and daring outwardly, while at heart trembling and cowering for my life. I was, however, faintly conscious, if I am to confess, that it would be better to die in the Mayor's room if die I must. But, to tell the truth, I was somehow strongly confident that I was never ordained by Fate to die in an earthquake such as this. But as it wouldn't do to cause my colleagues and subalterns trouble and anxiety on my account; and, moreover, nothing would be gained by thus keeping doggedly to my upstairs room; alone and solitary, I at last made up my mind to say good-bye to my long familiar room of business.

Once out of my room, I looked up to the ceiling of the corridors and found there some cracks and fissures newly created. In the business rooms of the Secretariat Bureau, double stands or cases for stowing away papers and documents were seen thrown bodily into the middle of the room. With calm steps, I came out as far as the top of the stone-steps in the front of the grand vestibule, and there my eyes were greeted with the sight of the two statues of Ota Dokwan and Tokugawa Iyeyasu, standing as immovable and unshaken as ever. At this spectacle of immobile stability, I felt my heart somehow swell with a sense of shame and emulation. "Look how calm and unmoved they are! Shame on me, if I be disturbed and bewildered," thought I to myself. Thus, somewhat self-scoffing and self-despising, I remained standing on the stone steps for a few short moments; but I could not bring myself anyway to descend the stone steps, and so I turned down the corridor to the left. None were there, of course. All rooms and chambers were empty, with the doors set ajar. I examined the braziers in the rooms to see if there were no live charcoals left, always the infallible source of fires on such an occasion of natural calamity. But I was glad to see that all necessary precaution had been taken. So, going past the City Council Hall and the room for the General Affairs Bureau, I again returned to the Mayor's room, where I threw myself into the accustomed chair. The electric lamps suspended from the ceiling were still swinging slightly. The clock on the wall was of course at a standstill. The book-cases, however, were not thrown out of their old situation. Soon after I regained my chair, there came another violent shock, a third strong earthquake. I didn't know if this was the third violent earthquake, but, to my mind anyhow, the first and

second violent shocks had come one upon the heels of the other, while the third shake, I thought, occurred in twenty or thirty minutes' time. This third shock was horizontal in vibration and seemingly of longer duration. But I didn't give much thought to it, thinking that it was after all nothing but one of those "reactionary" shakes, so usual in such a violent earthquake. When all was again calm and still, I heard someone's footsteps outside. Whom should I see but Kondo-san, manager in charge. I greeted Kondo-san with my "favourite" query:

"How are the water supply arrangements, Kondo-kun? Don't you know anything about that? Kondo-san's reply was: "Our Chief of the Water Supply Bureau went to the Yodobashi reservoirs early this morning, and is not back yet. Moreover, the telephone connection is all out of order, so that we're entirely left in the dark about that . . . "I again interrogated: "Where was the seismic centre possibly situated? Are there no tidal waves reported? Tell them to ask the Central Meteorological Observatory, please. And what is the condition prevailing in the City?" However, I was able to elicit from him nothing definite about these things.

The first thing to cause me great anxiety was the whereabouts of the seismic centre. If it should be situated in the Kwansai districts, we must say that the future of our country would be simply doomed. Next, if there should have been a tidal wave, coming in the wake of the earthquake, the low-lying districts, including Honjo and Fukagawa wards, must have been annihilated. Then, there must be fires,—from time immemorial, the necessary accompaniment to an earthquake. The supply of provisions and foodstuffs must needs also claim our attention.

These thoughts came swarming into my mind, and I was naturally full of anxiety and a sense of high responsibility. Now for the first time, I was keenly struck by the feeling that I must anticipate the worst and be prepared for it. And I was forced into the consciousness that the time was now come when, as Mayor of Tokyo City, I must needs have great determination and decision. Soon afterwards, there came a report from the Central Meteorological Observatory, saying that the seismic centre had been ascertained to lie in the direction of Oshima island off Izu province, and that no more violent earthquakes might occur, and also that there was no apprehension of a tidal wave. We felt greatly relieved. If really the consequences of the earthquake were limited to the Kwanto districts, then the problem would be considerably simplified and restricted in importance. As a timely measure, it was decided to make this fact widely known to the general public, either by posting up, in front of the City Hall, a bulletin setting forth this information, or by

means of automobiles driving about the streets for broadcasting the news. Also, the thought of the water supply arrangements continued to worry and harass me; for those who had gone to Yodobashi that morning were not back yet, neither did there come any report from them yet. At the time of an earthquake three years before, a certain temporary arrangement to meet the emergency had been made and was still left intact, so that, under this head, I felt somewhat easy in mind. Nevertheless, as the present earthquake was for more violent in nature, I could not but be full of anxiety and fear.

The next thing to cause me anxiety was the outbreak of fires. The supply of water was wholly cut off. Under the circumstances, if there should occur fire, we would have absolutely no weapon effectually to combat it. But I found a little consolation in the fact that fortunately the earthquake had happened in broad daylight, and so, naturally, there might be but little chance for the occurrence of fires. Next in my mind was the problem of provisions. Whether the warehouses at Fukagawa were safe, was utterly unknown; for the automobiles sent out to the Koto direction had all come back from the midway, being unable to gain their destination. Therefore, we decided to ask the military authorities whether there was any reserve stock of rice kept by the Army. Meanwhile, I think, from forty minutes to one hour seemed to have elapsed, which space of time was all occupied with these musings and various plans which I was turning over in my mind to provide for the possible events and happenings I apprehended. A watch I had, indeed, with me; but I was entirely forgetful of the passing of time, and so I did not look at it. Amid such confusion and din, I thought I could not well despatch my business promptly and efficiently, if I thus remained indoors, installed in the soft-cushioned chair, in the usual Mayor fashion. Thus thinking, I went down into the spacious garden of the City Hall. The sky was now all clear, the rain, which had been falling since the morning, ceased about ten o'clock. But it was unbearably hot and sultry. The scorching rays of the afternoon sun were pouring down straight upon our heads.

I took out a chair into the middle of the garden and seated myself in it. Whenever there came a "reactionary" shake, I looked up at the high tower soaring in front, and found it rocking violently right and left. It was only natural, thought I to myself, that people should be in such a state of consternation and fear. In the meantime, reports began to come pouring in from various quarters, informing me of the actual condition of things in different parts of the City. Some of them said that the Bureau of the Imperial Estates, within the precincts of the Palace, was aflame, or that a fire had broken out at a corner of the block just in front of Hibiya Park and the flames were raging unchecked; and so on and so forth. Meantime, reports of fire began to come

from all quarters in quick succession. For the first time, then, I became aware that, even by putting aside the consideration of ordinary etiquette usually prescribed *de rigueur*, I should hurry to the Palace to wait upon Their Majesties at this time of extraordinary emergency. Thus thinking, I called and leapt into the automobile and drove Palace-ward at top speed. In the car, I drew out my watch for the first time and looked at it. It was 1.50 p.m. Once within the Babasaki gate, I saw in front murky columns of smoke and fire rising skyward. "Ah!" thought I, "The Bureau of the Imperial Estates is still burning." In the direction of Hibiya park also, I saw ominous columns of smoke darkening the heavens. Speeding up the automobile, I hurried on and, in time, arrived at the Palace, where I found numerous high functionaries of State coming in haste, like myself, to wait upon Their Majesties. I was told, however, that Their Majesties were absent at the Imperial Villa in Nikko, and that H. I. H. the Prince Regent was all right at his Palace at Akasaka, and that no damage had been sustained by the Palace itself, but the buildings of the Imperial Household Department had suffered so greatly that it was deemed quite perilous to remain indoors. I stepped outside of the Palace gate, and saw numberless crowds of refugees rushing towards the Palace from the direction of Ginza by way of the City Hall. Indeed, the wide ground in front of the Palace was already filled thickly with these people. I returned to the Municipal Office, and at once caused a tent to be pitched in the wide garden of the City Hall, where I decided to see business. We municipal officials have a set of rules which are to govern our official conduct in time of emergency.

For the present at any rate, we had to contrive the organization and arrangement in accordance with the provisions of the said regulations. I decided, as the first thing, the definite division of the business: Deputy Mayor Mawatari was appointed to take charge of General Affairs, and Deputy Mayor Tajima to be Chief of the Engineering Department, while Deputy Mayor Yoshida was put at the Head of the Relief Department. But, as, at that time, Deputy Mayor Tajima happened to be absent at his native place on leave of absence, Department-Director Niwa was made to act for him during his absence. It was from about 2 to 3 o'clock p.m. that these arrangements, I think, were finally decided.

In the meanwhile, the surges of humanity in the spacious ground in front of the City Hall—all sufferers from the disaster and fleeing from the ferocious fire in hot pursuit—had begun to be so thick and close that there was, in reality, no more room for one to move round freely. Amidst such a scene of din and turmoil, separate events and happenings could not well impress themselves upon my memory. But disconnected, incoherent fragments of incidents, which



occurred later than three o'clock, remain relatively clear and distinct in my mind. They are, to put out a few of them out of my mental repository:

(1) From about three o'clock in the afternoon, crowds of people coming for refuge to the front of the City Hall were all told to go to the spacious ground in front of the Palace. But at about seven in the evening, even that wide space of ground had become overcrowded with people and their personal effects, almost to the point of overflowing, so that next they were told to seek safer shelter in the up-town regions.

(2) About four o'clock, I repaired to the official residence of the Home Minister and consulted with him on the subjects of appealing for relief to the Kwansai districts, the urgent supply of provisions, and the preservation of peace and order in the distressed districts.

(3) Towards evening, my heart was saddened by the spectacle of a number of wounded people, who were brought into the compounds of the City Hall, on stretchers or other makeshift contrivances. Especially pitiful was the sight of a person, who had got fatally burnt in the all-consuming flames but was left uncared for, for want of immediate medical aid, on a mat in the open, and who, when next time they came round to look at him, was found already dead and cold.

(4) Amidst the fuss and din in the garden of the City Hall, one of the women refugees, big with child, suddenly began to give symptoms of delivery, to make the confusion still worse confounded.

(5) The City Hall, especially after the Metropolitan Police Board and the Imperial Theatre had been reduced to ashes, began to be exposed to danger from fire, and we were advised even as many as three times by the Police to leave it and seek refuge elsewhere.

(6) About nine in the evening, the three-storey buildings of the Electric Department were burnt down. But fortunately the fire did not spread in the direction of the buildings of the Roads Department, so that at about ten o'clock we felt confident for the first time that the safety of the City Hall was absolutely assured, to the great relief of all concerned.

(7) In the evening, I got the ration of one "rice-ball," the first morsel of food to-day, but luckily not yet of "uncleaned rice," either.

(8) As night fell, the darkness in the rooms was barely dispelled by means of candles, as the electric lamps were all unavailable.

(9) Later, it was ascertained that no serious damage had been sustained by the watercourse of the City Water Supply. But all the pumping appliances

being out of gear, through suspension of the supply of electricity, all the arrangements for water supply were entirely useless.

(10) About five the next morning the Head of Fukagawa ward came to report that all the warehouses and the Army Provisions Depôt had been completely burnt down; I felt really amazed and dumb founded at this information.

(11) I spent the whole night in the tent, without a wink of sleep. Early next morning, I set about arrangements for the urgent supply of foodstuffs and provisions.

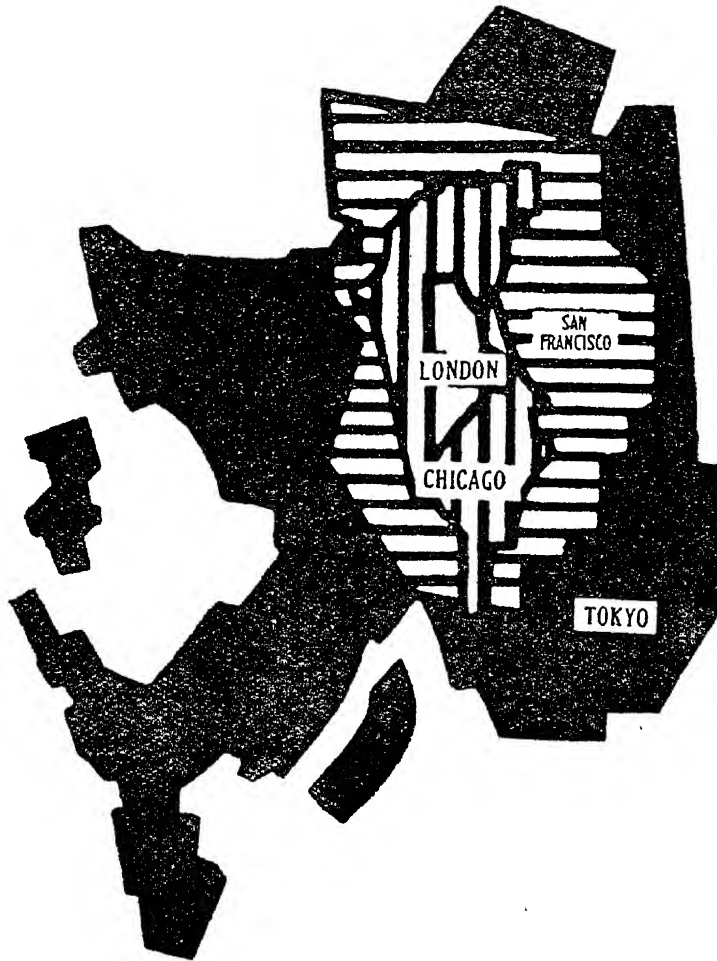
Thus the night of September 1 passed quickly amidst great confusion and overwhelming bewilderment. Indeed, none could well imagine, now that the calamity is become only an event of the past, the pains and difficulties we experienced in combatting the consequences of the disastrous occurrence, wholly deprived of the conveniences of the electric lamps, gas and water supply, telegraphic service, the means of communications, and what not, indeed, all the appliances and devices civilization had placed at the disposal of man. What struck me particularly was the fact that the municipal officials who were serving under me, were, each and all, highly conscientious in the efficient discharge of their duties, never sparing energy or pains, gladly self-sacrificing and absolutely disinterested; in short, they were more than amply deserving of unstinted praise. Another fact which did not escape my notice was that those citizens of the City, who were compelled to seek refuge in spacious ground, such as that in front of the Imperial Palace or before the City Hall, were all distinguished by calm composure and the praiseworthy spirit of mutual help and neighbourly affection, which were really manifest on every hand.

I was, of course, anticipating the occurrence of fires after the Earthquake, but never did I even dream of such magnitude and extent of ravage. After nightfall, I frequently went upstairs and had a view of the fires in the distance, yellowing and crimsoning the jet-black night sky all round the horizon encircling me. At dead of night, while I was alone sitting in the chair in the Mayor's room, deeply absorbed in solitary musing, looking up, from time to time, to see, through the windows around me, the lurid flames and smokes of the conflagration in the distance painting the night sky in weird ghostliness. Often hearkening to the detonating sounds which came so unceasingly from no one knew where, verily, I could not but be filled with a profound sense of sorrow and sadness to think that our Capital, which had been proud till only yesterday to be the premier and most prosperous city in the whole Orient, should now be lying transformed, in such a short space of time, into a veritable wilderness of ruins. On the other hand, these my half-reveries were rudely

## REMINISCENCES

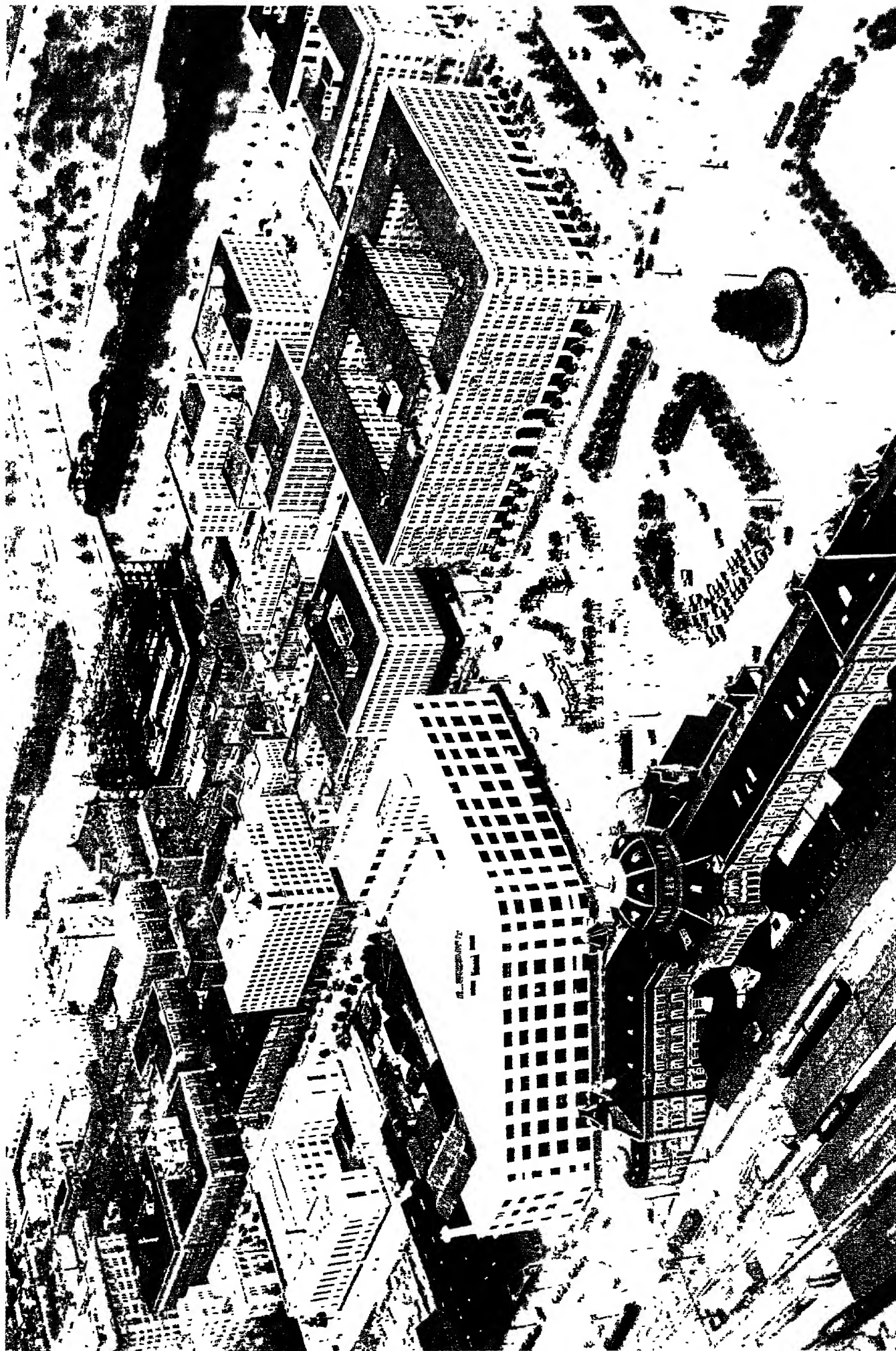
ruffled by the consciousness that as Mayor of the City, my responsibilities at this extraordinary moment were truly heavy and tremendous, a consciousness which plunged me into a maelstrom of reflexions as to how I, Mayor of the City of Tokyo, should confront this overwhelming national calamity, and duly and properly perform the duties required of me as the head of the municipal organization.

### BURNT AREAS OF THE WORLD GREAT FIRES



Cities	Year	Burnt Area	Loss of Wealth
		(sq.m.)	yen
London	1666 Sept. 2-6	1,768,603	107,300,000
Chicago	1871 Oct. 8-9	8,595,880	330,000,000
San Francisco	1906 April 18-21	12,165,344	750,000,000
Tokyo	1923 Sept. 1-3	33,477,836	5,506,386,034

1



Aerial view: Tokyo Railway Station and its neighbor



BOOK II

RECONSTRUCTION PLAN







Air view of the civic heart of Tokyo under Reconstruction (Photo: The Tokyo Asahi)



Street walking on the pavement of "Ginza," before the earthquake

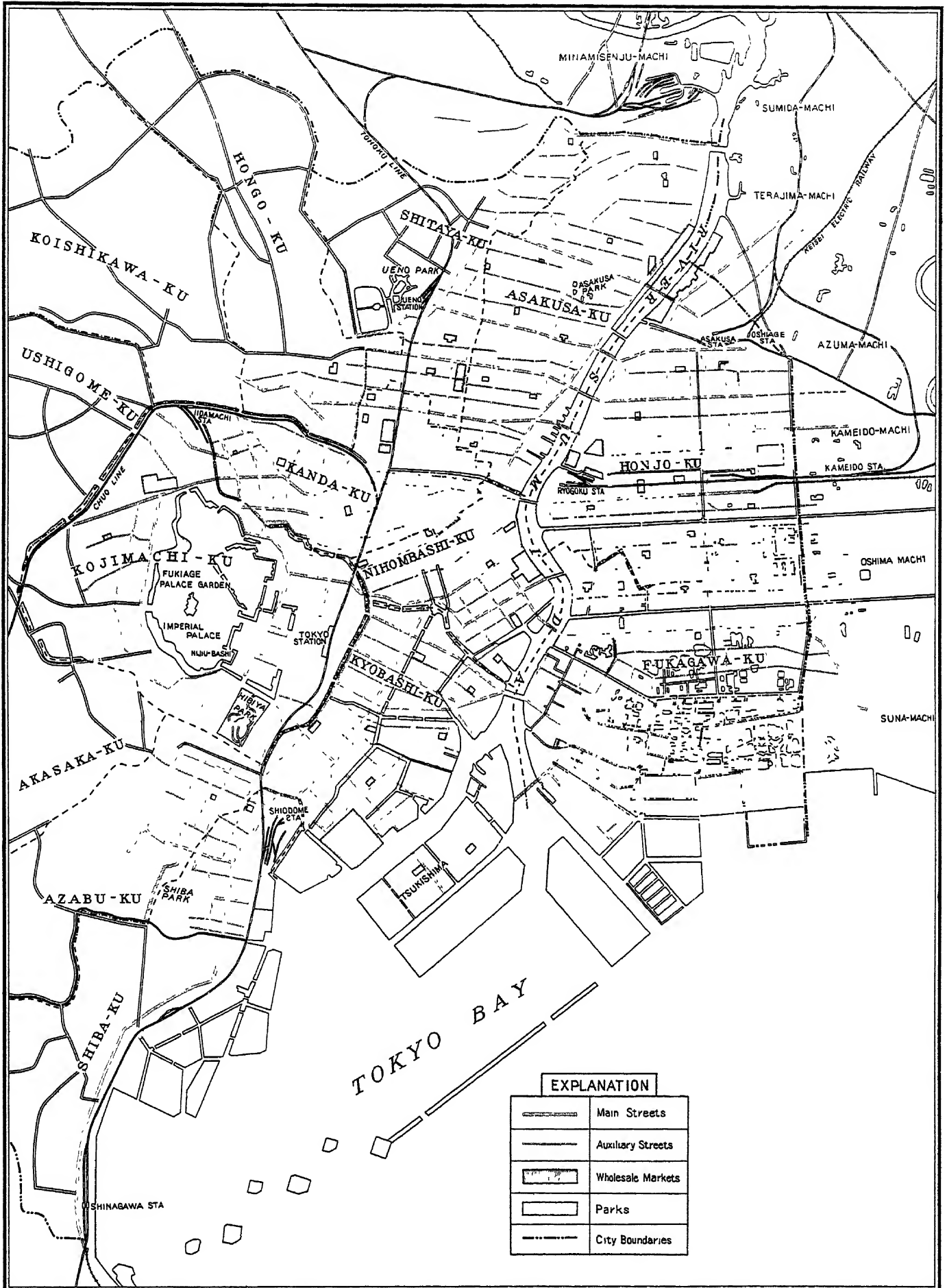


Earthquake demolition on the favorite street



The street at present, after reconstruction

## RECONSTRUCTION PLAN OF TOKYO





## General Remarks

The Yamamoto Cabinet, hastily formed on September 2, 1923, amidst the din and turmoil of the still smouldering ruins, after the Earthquake and Fire, lost no time in establishing two official organs; one for the formulation and execution of fundamental plans for the restoration of the City, which was named "Board to Consider the Reconstruction of the Capital," and the other for the planning of reconstruction work and its actual execution, under the name: "Board for Reconstruction of the Capital." We shall briefly describe here the process leading to the establishment of these two reconstruction organs.

Home Minister Viscount Goto succeeded in framing a plan for restoration of the Capital, and submitted it to a Cabinet meeting on September 6. The most important aims in the plan were:

- (1) To establish an organ to be called "Investigation Board for Capital Reconstruction," the function of which was to decide upon fundamental principles for city reconstruction. For execution of the reconstruction work, a special government department and an Official Board were established, designated respectively "Department for Reconstruction of the Capital" or "Board of Capital Reconstruction." By these means, it was hoped a twofold object might be attained, that is, on the one side, a helping hand could be extended to the people in distress, while, on the other, plans and schemes might be formed for the restoration of the city, the reconstruction of the different Government Department, the readjustment of the districts visited by the calamity and, at the same time, construction by the citizens at large be subjected to proper official supervision.
- (2) The expenditure necessary for the execution of the reconstruction work had to be met by outlay from the national treasury, and the funds required had to be raised by flotation of long-term foreign loans.
- (3) The whole earthquake-stricken area to be bought up temporarily, for purpose of readjustment, and a way provided for the sale or renting of the same, according to requirement.

Now, as to the proposed official "Investigation Board for Capital Reconstruction," it may be stated that under the presidency of the Prime Minister, it was to be composed, of the State Ministers, those persons who were accorded the treatment due to the Prime Minister or a State Minister, those persons who had held, at one time or another, the portfolio of some state

minister, and also those specially elected by Imperial order from among people of learning and wide experience, and those Government officials holding "*Shin-nin-kan*." Members of the Board were to present their views or give advice regarding the questions referred to them by the Prime Minister, and also to investigate important problems which might turn up, with respect to the reconstruction of the Capital, as well as those localities affected by the earthquake disaster.

On September 19 of the same year, however, the Board was transformed into "Board to Consider the Reconstruction of the Capital," and its official organization was duly announced.

Again, as to the official organization of the other reconstructive organ, that is, the "Department for Reconstruction of the Capital," we may say that it was to be placed under the direction of a State Minister to be newly created, and to consist of six bureaux. The kinds of reconstructive work to be entrusted to jurisdiction of this Department were; the planning and execution of the reconstruction of the City; the enforcement of the Law relating to the construction of buildings and houses in town districts; the construction of the building for the different Government Departments; and various other affairs respecting the work of reconstruction. Thus, this Department was to be charged with the whole work falling within the compass of city reconstruction, besides including various matters properly belonging to the sphere of the official activity of different Government Departments and, naturally, also, of those taken charge of by the various autonomous public bodies. All important matters were to be referred to the deliberation of Cabinet Conferences or to that of the "Board to Consider the Reconstruction of the Capital."

In contact with the "Board of Capital Reconstruction," the Board was to be placed under the direct supervision of the ministry as the determinative organ for plans and schemes of city reconstruction, while the actual execution of those plans and projects was entrusted to the different Government Departments. The plans and projects framed by the same Board were presented for consideration and approval to the Prime Minister, who was, on his part, to form definite plans by subjecting them to the deliberation of a Cabinet Conference or some other authority. The plans thus finally and definitely determined were sent down to the same Board, which in turn communicated them to the different Government Departments for actual execution. As to those carried out by a public body, the different Government Departments were left free to adopt suitable principles for their execution and to order the public body concerned to carry out plans.

The organization and functions of the special organs for the city reconstruction work were submitted to mature deliberation, in consequence of which



the Office newly created was named "Board for Reconstruction of the Capital," and its official organization and duties were essentially identical with those contained in the project for the "Department for Reconstruction of the Capital." The official organization of the same Board was formally promulgated on 27 of September, 1923.

Thus, we see that the fundamental principles for the great work of reconstructing the Capital were definitely decided after repeated deliberations by the "Board to Consider the Reconstruction of the Capital" and the "Board of Capital Reconstruction."

Later, in February, 1924, these two Boards for city reconstruction work were abolished, the latter being replaced by a new organ, "Bureau of Reconstruction" and attached to the Home Department as a special bureau. No change, however, was made in the fundamental principles of the execution of the reconstructive work.

It need not be stated that the reconstruction enterprise embraced all the important public undertakings, covering the readjustment of lands, the building or improvement of bridges, roads and streets, the opening and riparian work of rivers and canals, the drainage and reclaiming of lands adjacent to rivers and creeks. The greater portion of these matters naturally belongs to the sphere of town planning enterprises; and, in consequence, they were required to be submitted to the deliberation of the City Planning Committee, in accordance with the Law regarding city planning. However, the Government, taking into consideration the peculiar nature of Tokyo and Yokohama as civic bodies, framed a special law for town planning, which was more applicable to these cities. Also, the system of the City Planning Committee was replaced, with respect to those cities, by that of Special City Planning Committee which was thus made the advisory organ, in the work of town planning, for the Cabinet Minister concerned.

In this colossal work of city reconstruction, the Home Minister was made responsible for the execution of land readjustment in fifteen various districts; the improvement or building of trunk roads and streets, as well as bridges; the riparian work and opening of rivers and canals, as well as the laying out of larger public parks. On the other hand, the reconstruction works effected by the Governor of Tokyo prefecture, were:

The repair and improvement of the "state roads," the building of "circular road lines" and "radiating road lines"; as well as the repair and rebuilding of middle schools. Again, the Mayor of Tokyo himself had his own share in the work of reconstruction, and the following items fell on his responsible shoulders for execution:—The land readjustment in 50 different localities; the building or improvement of auxiliary roads and streets, as well as bridges; the

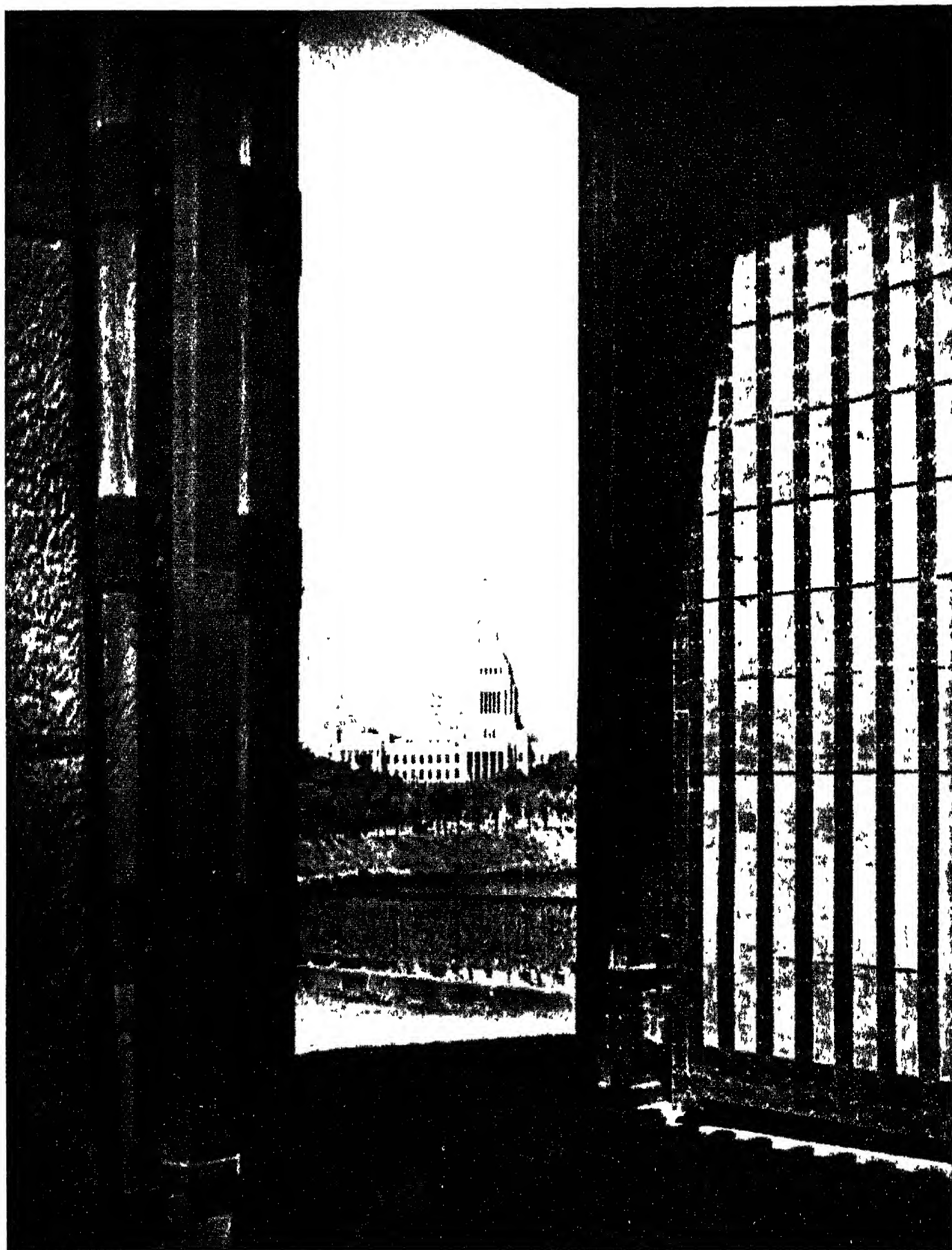


laying out of smaller public parks; the extension of the city water supply, or its restoration to former state of operation; the improvement of the sewerage system; the building of elementary schools; the establishment of a central wholesale market; the provision for various social enterprises; the construction of municipal hospitals; the arrangement for disposal of household refuse and garbage; as well as the execution of electric undertakings.

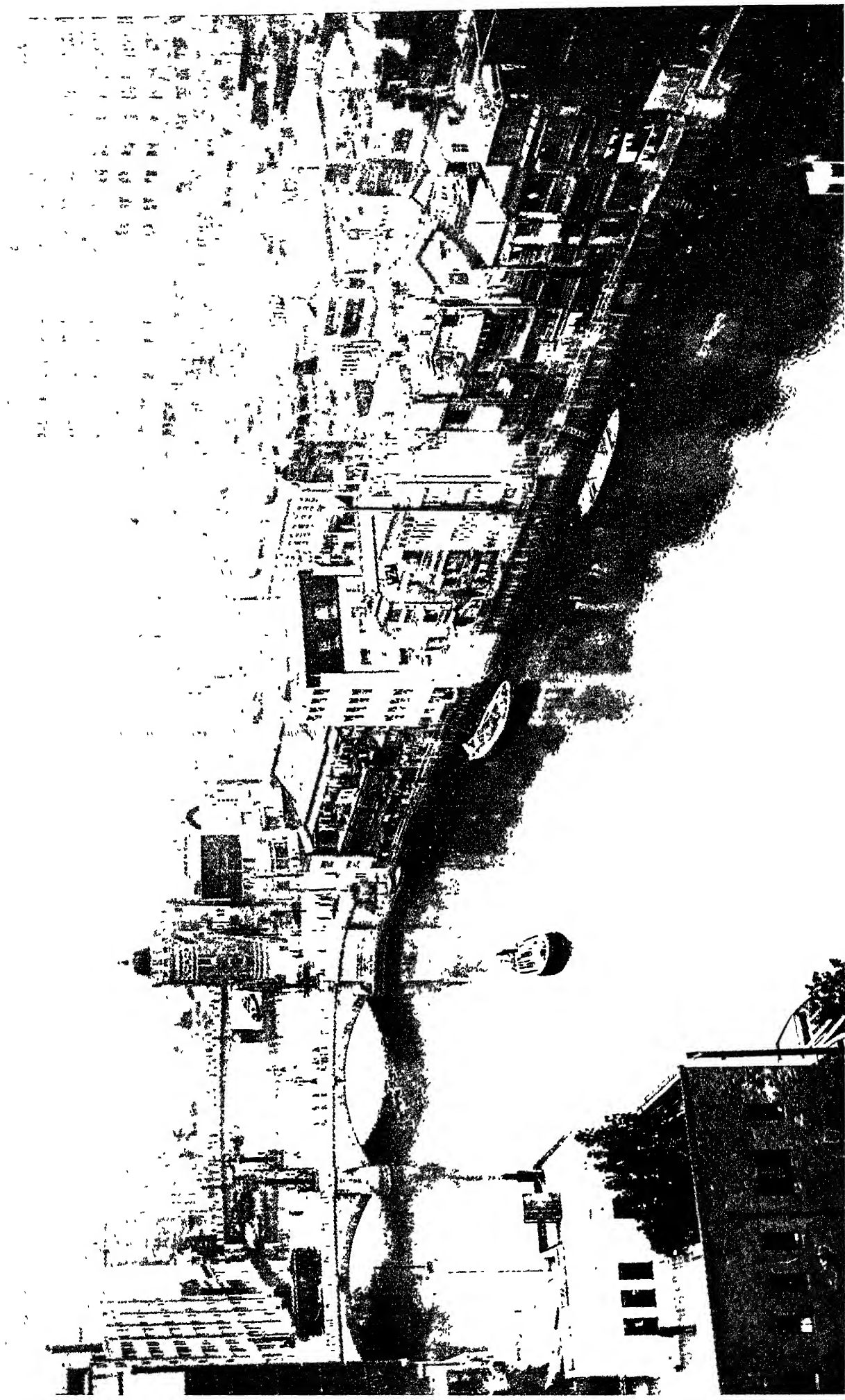
To ensure proper execution of the enterprises thus apportioned to Tokyo, the City first appointed, as its advisory organ, a committee for reconstruction work, consisting of thirty members of the Municipal Assembly and five members of the City Council. (See the end of Book II). As an executive organ, there was newly created an office called "Land Readjustment Bureau," later renamed "Reconstruction Business Bureau," whose duty was to see to the proper execution of land readjustment, while the rest of works were shared to the ordinary organs of the municipality.

In the chapters which follow, will be found a succinct description of the official organization and legislation pertaining to the work of Tokyo reconstruction schemes and projects introduced to the Diet for approval; of the process by which final and definite shape was given to the reconstruction plans tentatively framed, as well as of the appointment of a preparatory organ by the city of Tokyo, for realization of the work of reconstruction.

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The Parliamentaly Building, newly constructed, seen from Sakurada Gate



Nihon-bashi Bridge and others as viewed from water

# CHAPTER I

## Official Organization for Reconstruction of the Capital

### SECTION I

#### BOARD TO CONSIDER THE RECONSTRUCTION OF THE CAPITAL

##### I. ORGANIZATION AND PERSONNEL OF THE BOARD

The formation of the "Board to Consider the Reconstruction of the Capital" laid the foundation, so to speak, of the colossal scheme for restoration of the Capital. The Board was formed on September 19, 1923, by the promulgation of its official organization, and its duty was the consideration of higher plans in the work of city reconstruction. The Board was presided over by the prime Minister, and its members were appointed from among Cabinet Ministers as well as high Government officials and persons noted for erudition and extensive experience.

The Board in question, however, was abolished on February 23 in the following year; and in the course of this short period the Board, indeed, met only twice. But in spite of its brief existence, it was able to draft the guiding principles which constituted the backbone of the reconstruction plans as formulated by subsequent organs for the reconstruction work.

#### The Official Organization of the Board to Consider the Reconstruction of the Capital

- Article 1. The Board to Consider the Reconstruction of the Capital shall deliberate on important matters relating to the restoration of earthquake-afflicted districts in the Capital and elsewhere, in accordance with the order of the Prime Minister.
- Article 2. The Board may present proposals to the restoration of earthquake-afflicted districts in the Capital and elsewhere.
- Article 3. The Board is formed of the President and a certain number of persons.

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The Prime Minister shall act as President, and the members of the Board are to be appointed by the Emperor from among the Cabinet Ministers, persons who have once held the portfolio of a Cabinet minister, or Government officials holding "*Shin-nin-kan*" or persons noted for erudition and wide experience.

- Article 4. The President shall control and supervise the affairs of the Board; and, when a conference is held, shall act as its chairman.
- Article 5. When the President is prevented from performing his duties, his place shall be taken for the occasion by a member of the Board specially nominated by the Prime Minister.
- Article 6. A chief Director and a certain number of assistant directors are appointed for the Board.
- Article 7. The chief Director is appointed, by command of the Emperor, from among members of the Board, and he shall control the management of general business.
- Article 8. The assistant directors shall be appointed by the Cabinet, on the recommendation of the Prime Minister, and they shall attend to the despatch of general business, under the direction of the Chief Director.
- Article 9. The members of the Board are accorded the treatment due to State Ministers.

### APPENDED RULES

The present Ordinance shall go into effect on and from the day of promulgation.

The committee-men and other members of the same Board appointed on the same date, in accordance with the provisions of the aforementioned Official Organization, were as follows:

Baron Hikokichi Ijuin, Foreign Minister.  
Viscount Shimpei Goto, Home Minister  
Mr. Junnosuke Inoue, Finance Minister  
General Baron Gi-ichi Tanaka, War Minister  
'Admiral Tsuyoshi Takarabe, Minister of the Navy  
Dr. Ki-ichiro Hiranuma, Minister of Justice  
Dr. Keijiro Okano, Minister of Education  
Baron Kenjiro Den, Minister of Agriculture and Commerce  
Mr. Tsuyoshi Inukai, Minister of Communications

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Mr. Kazutsugu Yamanouchi, Minister of Railways  
Viscount Korekiyo Takahashi  
Viscount Takaaki Kato  
Count Miyoji Ito  
Mr. Senshi Egi  
Viscount Ei-ichi Shibusawa  
Mr. Otohiko Ichiki  
Mr. Toyoji Wada  
Viscount Nobumitsu Aoki  
Mr. Masami Oishi

Chief Director:

Viscount Shimpei Goto

Assistant Directors:

Mr. Seiji Tsukamoto  
Mr. Sukehide Kabayama  
Mr. Joji Matsumoto  
Mr. Shunji Miyao

## II. PLANS AND PROJECTS OF THE BOARD

The first meeting of the Board took place on the morning of November 24, 1923, at the official residence of the Prime Minister. Mr. Shunji Miyao, a director, read out the following query referred to the Board, for deliberation and advice by the Prime Minister, being followed by Viscount Shimpei Goto, Chief Director, with an explanation of the same. Mr. Senshi Egi and several others offered interrogations thereon, to which Viscount Goto gave answers. After discussion, the question was referred to the consideration of a special committee later to be appointed by the Chairman both from among the members of the ministry and proper persons outside ministerial circles. In consequence, the following were nominated to constitute the Committee, with Count Miyoji Ito as Chairman.

Outside of the Cabinet:

Count Miyoji Ito  
Viscount Korekiyo Takahashi  
Viscount Takaaki Kato  
Mr. Senshi Egi  
Viscount Nobumitsu Aoki  
Viscount Ei-ichi Shibusawa

## THE RECONSTRUCTION OF TOKYO

From among Cabinet Ministers:

Viscount Shimpei Goto

Mr. Junnosuke Inoue

Dr. Keijiro Okano

Baron Kenjiro Den

Mr. Tsuyoshi Inukai

### PLANS AND PROJECTS BROUGHT UP FOR DELIBERATION BY THE BOARD

#### I

### GENERAL OUTLINE OF PLANS FOR RECONSTRUCTION OF THE CAPITAL

The plans and schemes for reconstruction of the two great cities of Tokyo and Yokohama had, of course, to be well able to restore these two cities to something more than their pre-earthquake days, and thus ensure their natural expansion and development.

And the scope of the reconstruction enterprise was necessarily limited by the provisions of the City Planning Law which regulated and controlled the planning work of different cities and towns in Japan. The districts and localities falling within the purview of the Law in question, include, as a matter of course, places which have high possibilities of development both economically and socially, as cities and towns. Therefore, there was but little need for any change in this respect. Also, commercial and industrial districts as well as residential localities had been clearly and definitely determined immediately before the earthquake disaster, by promulgation of the City Planning Law, after due deliberation by the respective authoritative organs. Thus, these restrictions and decisions might be generally adopted and followed as guiding policies in the reconstruction undertakings, through with proper consideration for the actual condition of the districts concerned, the facilities of communication and transportation, as well as the general aspects of restoration after the earthquake calamity. Accordingly, both Tokyo and Yokohama decided to make it their great aim in reconstructive work to put forth all endeavours for reconstruction within the limits set by the town planning scheme, and on the very sites swept by the disastrous fire and earthquake, create new cities of sufficient solidity and orderliness to be really worthy their citizens. Naturally, such town planning work had to be carried out within the bounds allowed by



the economic and financial resources of the people, and by slow and easy stages regulated by degrees of urgency. A satisfactory system of public sanitation and hygiene, the assurance of public security, promotion of the economic life and education of the citizens, as well as improvement of the means of communication: these things made a great demand on the attention of the authorities. But, first of all, in order to ensure the maintenance of public security in the Capital and the advancement of public well-being and happiness, they thought it most important and urgent first to set about the work of reconstruction in those localities which were swept by the conflagration and yet in smouldering ruins. As to the portion of the reconstruction work to be executed by the State and that to be effected by the local public body, as well as the necessary expenditure to be borne by each of them, they were determined by regulations specially framed. In the latter case, some financial assistance was granted by the Government for facilitation of the work. Below, we give a brief outline of these arrangements:

(1) The standardization of roads and streets and the system of road lines—Wise decision and judicious foresight had to be exercised in the construction and improvement of roads and streets, which, as is needless to say, form the foremost essentials in the planning and building of cities and towns, especially in view of the terrible havoc wrought by earthquake and fire. Therefore, great attention was paid to the proper arrangement of main trunk lines of communication; and, in order to anticipate the future construction of high-speed railway lines, the width of such trunk lines was fixed at from 27.27 metres to 54.54 metres; and there were to be auxiliary roads branching off from these main roads, which were to have a width of at least 10.91 metres. Besides, it was decided that, at the principal cross-roads as well as at the heads of bridges, there should be spaces of proper size.

(2) The Arrangement of Public Parks—The proper arrangement of public parks was effected gradually, keeping pace with the adjustment of Government-owned lands. To meet immediate requirements, it was decided to lay out several public parks both in Tokyo and Yokohama, the names of for that of Tokyo are given below. Besides, it was deemed desirable to create, as far as possible, recreation grounds for the benefit of small children, in the neighbourhood of those elementary schools which had to be rebuilt anew, in consequence of demolition by the earthquake and conflagration.

Sumida Park

Kinshi Park

Hamacho Park

(3) The arrangement of public markets—In Tokyo, the Central



Wholesale Market was to be situated in that part of Tsukiji which had been formerly used by the Navy Department. In Yokohama, a similar central market was opened somewhere in the vicinity of Takashimacho. By these means, it was hoped to give help to the city concerned in its efforts to furnish proper convenience in the matter of public markets. Besides markets for vegetables and greens in Tokyo, a public market of a like nature was further permitted to be opened in the neighbourhood both of Ryogoku and Akihabara railway stations.

(4) The Adjustment of residential land plots — If, as the result of the construction of new roads and streets or of the opening of canals and creeks, those plots of land which had hitherto well served for house building, should now come to lose something of their former value, or if such a step should be necessitated by the particular circumstances of the locality concerned, such plots of land had to be subjected to the process of land readjustment.

(5) Precautionary Arrangement for control and prevention of fire — The City Planning Law already contained provisions for control and prevention of fires; and it ordered “fire prevention zones” at specified points along principal roads and streets as well as at important places in the civic centre. But in consequence of the projected construction of new roads and streets or of the improvement of the old roads and streets, it was decided that new “fire prevention zones,” of a shape and space similar to the road lines themselves, should be provided in all those districts through which the newly projected roads and streets were to run. Besides, in the districts which were to form the civic centre, the extension of collective “fire prevention zones” was projected; and, at the same time, the construction of non-inflammable buildings in these “fire prevention zones” was to be encouraged and assisted by proper means.

(6) Relations of Tokyo and Yokohama, and the construction of harbours and canals—The port of Yokohama is meant to serve as the “outer harbour” of Tokyo City. The full restoration of the old facilities and usefulness was now earnestly striven for by the municipal authorities concerned, and the speed realization of the “third period extension plan” was also ever kept in view. With the attainment of these two ends, steps were taken for creating an “inner harbour” at the mouth of the Sumida River, which is virtually the artery for the economic life of the Metropolis. Then, efforts would be put forth for perfecting connection of these two harbours. Besides, in order to contribute to the development of the industrial districts lying along the course of the river in question, a project had been formed for cutting a canal about 15,454.55 metres in length, with a width of 90.91 metres and a depth of 2.42 metres, stretching

from a certain point at Tsurumi, Kanagawa prefecture, to a certain spot on the Omori shore, in Tokyo prefecture, traversing, in the middle, the lower reach of river Rokugo. Further, in order to reinforce the utility of this projected canal, a plan was framed for newly digging or improving smaller canals or creeks, which might be necessary, for increasing the facilities of transportation by water, for the mutual convenience of the projected "inner and outer harbours," principal freight railway stations as well as commercial and industrial districts. To ensure further increase of facilities, the plan embraced an item for the creation of suitable "warehousing zones" at proper spots along the river course.

## II

### THE FISCAL YEAR FOR EXECUTION OF CITY RECONSTRUCTIVE WORK AND FINANCIAL POLICY FOR REALIZATION OF SAME

The City Reconstruction Plan was to be fully carried out during the seven years from the fiscal year 1923-24, and the expenditures required for the work were to be met, when necessary, by public loans. Moreover, in view of the actual condition of finance in the provinces, the following were proposed for adoption as emergency measures to tide over the difficult situation.

(1) The payment of the share of outlay to be borne by the local public bodies, which was required for the execution of various enterprises undertaken by the State, might be suspended for the time during which the reconstruction work should continue; but, after the recovery of normal conditions of provincial finance, the payment might be made in instalments within a proper period of time to be suitably fixed.

(2) Of the expenditures for undertakings conducted by local public bodies, the funds necessary for the construction and repair of roads and streets, bridges, the water supply and sewerage system, schools, central wholesale markets, household garbage disposal places, and, further, for the proper promotion of public sanitary conditions, various social enterprises and public parks, as well as for the running or starting of gas and electric undertakings, all these funds were to be accommodated, in the case of a prefecture, without interest, for a period during which the reconstruction work should proceed; while, as regards a city, the raising of a local loan was made permissible, on assurance and guarantee of the State. With the exception, however, of profit-producing enterprises, such as water works, gas and electric undertakings and railway enterprises, the interest on the loan raised for the funds needed for all other kinds of work,

was fixed not to exceed 7 percent per annum; and this interest was to be paid by the State out of its own coffers, during the years that the reconstruction work should continue. As to the money advanced by the State, it should be repaid within 30 years after full completion of the work of reconstruction.

### III

#### REGULATION OF CITY RECONSTRUCTION PLAN, AND EXECUTION OF RECONSTRUCTION WORK

To exercise proper control in framing and executing the reconstruction plan for Tokyo and Yokohama, it was intended to enact a Law relating to the plan of reconstruction.

The more important points of the intended law in question were:

(1) The work of reconstruction and limits of districts to be covered by the plan of reconstruction should be decided by the President of the "Board of Capital Reconstruction," after taking into due consideration the opinions expressed at the councillors' conference of the "Deliberative Board for Reconstruction of the Capital," subject to formal sanction of the Cabinet.

(2) As to the construction of principal roads and streets, the improvement and excavation of rivers and canals, the laying out or repair of public parks, the improved accommodation of ports and harbours,—all these being absolutely essential to a social organism called "city,"—it was made a general rule that all these public undertakings should be carried out by prefectural or local administrative authorities which control and supervise public bodies, excepting, however, those public enterprises which should be undertaken by the Central Administrative Authorities concerned. All other public works, however, were to be conducted under proper sanction of the President of the "Board of Capital Reconstruction."

(3) The expenditure, necessary for reconstruction enterprises to be effected by the Central Administrative Authorities, was to be defrayed, on principle, out of State funds, but a part of such expenses was, as a matter of fact, to be borne by the public body to whose jurisdiction the districts concerned should happen to belong.

(4) As to expenditure required for reconstruction work executed by administrative authorities having control and direction of public bodies, the rule was that it should be all borne by those public bodies themselves, but a portion of such expenses would be granted out of the State coffers, the exact amount of this State subsidy being fixed separately.

(5) It was made allowable for public bodies, which bore the expenditure requisite for reconstruction work, to exact a certain reasonable amount of money, as a contribution, from such persons as would derive evident profit from those reconstructed public works. The kinds of public works of reconstruction to which such contributions would be payable, the amount of those contributions as well as the way of payment, were to be fixed by Imperial Ordinance.

(6) It was also ruled that, except for the lands or districts falling within the purview of the Law of city house buildings, there should be marked out, within the districts covered by the reconstruction scheme, for the particular objects of public economy, or for the sake of the maintenance of good morals or preservation of scenic beauty, special land sections on which restriction might be enforced, by means of an Imperial Ordinance, respecting buildings and structures, the engineering work on the land itself, or in the matter of landownership. The indication of such districts and lands, no matter whether regulated by the provisions of the Law concerning buildings and structures in city districts or not, was made subject both to the decision of the president of the "Board of Capital Reconstruction," on the strength of the opinion of the Councillors' conference of the same Board, and, also, to the sanction of the Cabinet.

(7) The change of lands within the limits of districts required for reconstruction work, the erection of buildings, the gathering or cutting of plants and trees, as well as the gathering of earth and stones, might be prohibited or restricted.

(8) If necessary in consequence of the plan of reconstruction, or as the result of reconstruction work, or for reasons of engineering work or investigation with respect to districts or lands concerned, it was made permissible that Government officials or officials of the public bodies could enter on the land belonging to other persons, for the purpose of land survey or of investigation, and transplant trees and plants to other places, or remove earth and stones, which might prove obstacles in the way of the proper execution of these purposes. The damage or injury resulting therefrom would be duly indemnified.

(9) It was understood that the land readjustment, within the localities covered by the plan of reconstruction, was solely for the purpose of increasing and promoting the utilization of such lands as residential lots. Such land readjustment were to be carried out by organizing, as far as possible, "land readjustment unions or corporations."

The actual execution of the land readjustment should be regulated by provisions of the Cadastration Law relating to the readjustment of arable lands. If, in any case, however, the provisions of the Law in question should be found

## THE RECONSTRUCTION OF TOKYO

unfit for immediate application, they could be ruled by special regulations.

(10) All rights other than the right of ownership with respect to lands and things in general and also those lands needed for the purpose of reconstruction undertaking, might be appropriated or used. In case there should remain, after the appropriation of land, still a lot of land not large enough to be utilizable for residential purposes such land lots might be appropriated, too. Such use or appropriation of lands was to be ruled by the provisions of the Land Appropriation Law. In case negotiation should fail, the time of appropriation, the limits and the indemnity for damage and injury, should be decided by an Indemnity Investigation Committee to be newly created, instead of by the Appropriation Investigation Committee.

(11) If the State Minister interested should deem it necessary for the purpose of reconstruction work, he was to be authorized to order the public body concerned to allow to the actual executors of the reconstruction work free use of the lands reserved for official or public purposes.

(12) With regard to land appropriated for reason of land readjustment or in consequence of being not large enough for residential purposes, no right of repurchasing should be recognized. The control and supervision as well as the ownership of the land effected for the necessity of reconstruction enterprise, should be regulated by a special Imperial Ordinance.

(13) Any compulsion, petition or litigation concerning the result of the operation of this Law or of an order issued on the basis of the provisions of the same Law, was to be regulated by the provisions of the City Planning Law.

### ESTIMATE OF EXPENDITURES REQUIRED FOR RECONSTRUCTION OF THE CAPITAL

Expenditure for maintenance of the Board for the Reconstruction	
of the Capital . . . . .	¥ 28,400,000
Salaries . . . . .	11,360,000
Business expenses . . . . .	17,040,000
Work of Reconstruction . . . . .	554,552,000
Reconstruction of Tokyo . . . . .	488,370,000
Reconstruction or improvement of roads and streets . .	406,400,000
Ports and harbours . . . . .	32,750,000
Canals and creeks . . . . .	28,570,000
Public parks . . . . .	11,900,000
Land readjustment . . . . .	8,750,000

# OFFICIAL ORGANIZATION FOR RECONSTRUCTION OF THE CAPITAL

Restoration of Yokohama .....	52,432,000
Roads and streets .....	42,300,000
Canals and creeks .....	5,612,000
Public parks .....	1,959,000
Land readjustment .....	2,561,000
Construction of a canal between Yokohama and Tokyo .....	13,750,000
Loans for reconstruction work .....	10,325,402
Tokyo prefecture .....	7,749,698
Kanagawa prefecture .....	2,575,704
Subsidies granted for supplying deficiency of reconstruction funds .....	108,700,579
Subsidies granted for the laying out "fire prevention zones" ..	20,000,000
Subsidies granted for land readjustment .....	2,775,000
Restoration and reconstruction work in various districts and localities .....	58,166,569
Tokyo prefecture .....	5,083,560
Kanagawa prefecture .....	742,317
City of Tokyo .....	41,579,209
City of Yokohama .....	10,761,483
Government aid in payment of interest on public loans issued for reconstruction and restoration work in various districts and localities .....	28,759,010
City of Tokyo .....	21,990,688
City of Yokohama .....	6,768,322
Grand total .....	¥702,977,981

The second meeting of the Deliberative Board took place at the official residence of the Prime Minister on the afternoon of December 27, 1923, when three propositions (named No. 1, No. 2 and No. 3 respectively) were submitted. Count Miyoji Ito, Chairman of the Committee, took occasion to give a detailed account of the procedure of discussion and investigation of the three propositions in question at the committee meeting; and he then made a report concerning a tentative plan formulated by the Committee. No objection was raised, and so it was passed in its original shape, with unanimous approval. Therefore, Count G. Yamamoto, President of the Board, declared that the Government would fully respect the spirit of the resolution thus passed at the meeting and spare no efforts to give satisfaction to all concerned in realization of the proposal.

Propositions advanced by the special committee of the Board

1. Standardization of road lines: Concerning road lines in Tokyo, some

## THE RECONSTRUCTION OF TOKYO

suitable retrenchment was to be made in the width of roads as indicated in the original plan. Such retrenchment, however, was restricted to main trunk roads in the Capital. In all other cases, old roads should be utilized, for financial reason. Only in really inevitable cases, a suitable widening of roads should be permitted.

2. As to city water supply, sewerage system as well as underground structures and appliances in the Capital, their completion should be expedited, for the time being, at State expense.

3. To the sites selected in the plan for public parks both in Tokyo and Yokohama, there was no decided objection. But it was desirable that there should be sufficient provision for and proper arrangement of water reservoirs, within the parks concerned, as precautionary measures for the prevention of possible fires.

4. The proposed sites for the construction of public markets both in Tokyo and Yokohama, were, on the whole, approved.

5. The actual work of readjusting land plots within the city residential quarters both in Tokyo and Yokohama, should be entrusted to the care and charge of the civic authorities of the two cities.

6. The projected measures and arrangement for prevention of fires, were generally approved, with necessary amendment.

7. The harbour construction undertaking in Tokyo, as well as the opening of a canal between Tokyo and Yokohama, should be separated from the general scheme of the post-earthquake reconstruction work, and be wholly entrusted to the authorities concerned for proper execution of the same.

8. As regards the projected plan concerning canals and creeks within the city, there was no serious objection.

9. As to the estimated time required for full completion of reconstruction work in the Capital, as well as the financial policy for its execution, there was no particular objection made, except that the proposed period of completion should be extended to five years.

10. Expression of definite opinion should be reserved concerning the framing of the City Reconstruction.

Matters deemed desirable: 1. The Government should take steps for facilitating the acquisition of funds necessary for restoration of commercial and industrial enterprises. 2. It is desirable that the authorities should endeavour to establish a perfect fire insurance system for security of the funds employed for the construction of houses and buildings.



Summary of the report made by Count Miyoji Ito, Chairman of the Committee:

To item No. 1 of the Committee's proposition, strong opposition was raised by the extra-Cabinet members of the Committee, concerning the construction of new roads and streets. But after heated discussion and mature consideration, the two opposing camps were able to discover ground for compromise and come to terms, with the result that the plan for constructing two lines of trunk roads only was approved, on condition, however, that their width should not exceed a limit of 32.73 to 36.36 metres, for the sake of economizing in expenses.

Regarding item No. 2, it was claimed that realization of an efficient arrangement for city water supply and a satisfactory sewerage system, both absolutely indispensable and essential to the daily life of a city, should be expedited by all means; and therefore, they should not be left to the hands of local autonomous bodies. Accordingly, it was proposed that these enterprises should be hastened, as a temporary measure, with the aid of the State. Upon their completion, however, the expenses thus temporarily to be defrayed out of the State treasury should be reimbursed. The same applied to underground fixtures and appliances.

In item No. 3, due regard was, of course, taken of calamitous occurrences, such as the earthquake disaster.

As to item No. 5, it was thought reasonable and proper that the execution of the work contemplated should be entrusted entirely to the public body concerned, on an understanding with the owners of the lands, as confusion and complication were likely to be engendered if land readjustment should be carried out compulsorily and at once; and, moreover, it was deemed not easy to arrive at a voluntary understanding with the owners land.

In regard to item No. 6, there was some apprehension that the reconstruction work, which had naturally to rely, in great measure, for its satisfactory conduct upon the initiative exertion of the city inhabitants themselves, would be impeded, if the contemplated districts or zones, where measures and arrangements for prevention of fires would be provided, should be unduly enlarged and extended. Therefore, much thought and suitable consideration should be exercised in this respect.

Concerning item No. 7, it was regarded not imperative that the proposed scheme of construction for Tokyo harbour and the cutting of a canal between Tokyo and Yokohama, should be submitted for deliberation to the extraordinary session of the Imperial Diet, the question of its suitability or unsuitability being waived for the time.

With respect to item No. 9, it may be stated that the time for comple-



## THE RECONSTRUCTION OF TOKYO

tion, seven years, as contemplated in the original plan, was now amended to five years, for the purpose of expediting, as much as possible, the work of city reconstruction; and the deficiency of financial resources for the work, it was believed, could be met by retrenching the scope and scale of the projected main trunk roads.

### III. ABOLITION OF THE BOARD

As stated above, the plans and schemes for reconstruction of the Capital, referred, for deliberation, to the "Board to Consider the Reconstruction of the Capital," were definitely decided; and, thus, the foundation of reconstruction work was firmly laid. As it happened, however, on December 27, 1923, the Yamamoto Cabinet resigned, and January 7, the next year, saw the formulation of the Kiyoura Ministry. The new Cabinet, at a meeting on January 8, unanimously agreed that, as the Board was no longer needed, its abolition was at once brought about, and on February 23, this was formally announced.

## SECTION II

### BOARD OF CAPITAL RECONSTRUCTION

#### I. The Official Personnel

The "Board of Capital Reconstruction" was under direction and supervision of the Prime Minister, and its chief and proper business was the framing of town planning schemes for Tokyo and Yokohama, and the execution of the undertakings as detailed in them, and, also, of the various requirements concerning buildings and houses in urban districts, as set forth in the Law relating to the structures in city areas. To the Board in question, a certain number of advisors and councillors were appointed. Also a deliberative committee was organized, whose duty was to answer, as an advisory organ, the queries addressed to it by the President of the Board, concerning the reconstruction business.

### OFFICIAL ORGANIZATION OF THE BOARD

(Promulgated by Imperial Ordinance No. 425, September 27, 1923)

#### Article 1:

The "Board of Capital Reconstruction" is under the direction and supervision of the Prime Minister; and its proper function is to see to the formulation of town planning schemes for Tokyo and Yokohama, the

actual execution of the same, and of the requirements as detailed in the "Law of city house building" concerning buildings and houses in the urban districts, together with the affairs and business in general, which have any bearing on the work of reconstruction.

In addition to the duties mentioned in the preceding paragraph, the Board shall attend to all business relating to fulfillment of the "Regulations concerning temporary provision of goods and materials."

## Article 2:

The Board is composed of the members mentioned below:

1	President	.....	" <i>Shin-nin-kan</i> " <sup>1</sup>
2	Vice-Presidents	.....	" <i>Choku-nin-kan</i> " <sup>2</sup>
1	Chief Engineer	.....	"
7	Directors	.....	"
15	Secretaries	.....	" <i>So-nin-kan</i> " <sup>3</sup>
30	Commissioners	.....	"
105	Engineers	.....	"
	(Of the number, ten may be accorded " <i>Choku-nin-kan</i> ")		
150	Clerks	.....	" <i>Han-nin-kan</i> " <sup>4</sup>
350	Junior Engineers	.....	"

Besides the secretaries as mentioned above, the Cabinet is authorized to appoint a certain number of other secretaries from among the officials of higher rank belonging to different Government Department concerned, at the special request and recommendation of the Prime Minister.

## Article 3:

The following six bureaux and the President's secretariat are established in the Board.

Bureau for Planning  
 Bureau for Land Readjustment  
 Bureau for Construction  
 Bureau for Engineering  
 Bureau for Provision of Goods and Materials  
 Bureau for Accountancy

## Article 4:

The President's Secretariat attends to business concerning the movement

- 
1. An official personally appointed by the Emperor
  2. An official appointed by the Emperor
  3. An official appointed by the Emperor's approval
  4. A junior official

of the officials of the Bureau; or business requiring special confidence and secrecy; or relating to official papers, documents, correspondence, as well as that which does not manifestly belong to the particular charge of any other Bureau.

Article 5:

The Bureau for Planning is charged with affairs concerning town planning, as well as schemes of reconstruction in general.

Article 6:

The business of the Bureau for Land Readjustment is that relating to readjustment of land plots as well as the adjustment of lands in general.

Article 7:

The Bureau for Construction attends to business concerning the actual execution of the "Law of city house building," as well as affairs relative to houses and buildings in general.

Article 8:

The Bureau for Engineering is charged with the execution of the town planning enterprises, as well as reconstruction work in general.

Article 9:

The Bureau for Provision of Goods and Materials takes charge of all business concerning execution of the "Regulations relating to temporary provision of goods and materials," as well as the business connected with the procuring of various kinds of materials needed for the work of reconstruction.

Article 10:

The Bureau for Accountancy attends to affairs connected with the budgets, the balancing of accounts, as well as business relative to accounting in general.

Article 11:

Besides the officials mentioned in Article 2 above, Advisers and Councillors are appointed, and they are to participate in the business of the Board.

The Advisers and Councillors are appointed by the Cabinet, at the special request and the recommendation of the Prime Minister, from among officials of higher rank, belonging to the different Government Department, or persons known for deep erudition and wide experience.

The Adviser is given treatment due to "*Choku-nin-kan*," while the Councillor that accorded to "*So-nin-kan*." It is provided, however, that in the case of officials who already enjoy a certain official rank properly due to them as officials in the Government Department to which they belong, the same treatment is also accorded as officials of the Board.

Article 12:

The President exercises direction and supervision over the official under him, supervises the affairs of the Board, and decides, at his sole discretion, the movement of all officials of "*Han-nin-kan*" and lower ranks.

Article 13:

The Vice-Presidents assist the President; and when the President is absent, the Vice-President, who will be specially nominated by the Prime Minister, acts as deputy in the discharge of the duties attaching to the President.

Article 14:

The Chief Engineer controls and supervises all business relating to engineering work.

Article 15:

Each Bureau has its appointed Chief. The Directors are to act as chiefs. The Chief of the Bureau attends to the business of the Bureau, under command of the higher officials concerned.

Article 16:

Those Directors who are not Bureau Chiefs, attend to the business of the Bureau, under command of the higher officials concerned.

Article 17:

The Secretaries and Commissioners attend to business, under the command of the higher officials concerned.

Article 18:

The Engineers attend to business relating to the engineering work, under command of the higher officials concerned.

Article 19:

The Clerks attend to general business, under control and direction of the higher officials concerned.

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### Article 20:

The Junior engineers attend to the business relating to engineering work, under the control and direction of the higher officials concerned.

### Article 21:

A committee of Councillors is organized in the Board of Capital Reconstruction.

The aforesaid Committee is to answer questions referred to it by the President, and also makes investigation on problems of important nature.

### Article 22:

The Committee of Councillors is composed of a Chairman and a certain number of members.

In case it should be necessary to call for special investigation of certain problems, temporary members may be appointed for reinforcing the Committee.

### Article 23:

The Chairman of the Committee of Councillors, the members as well as temporary members of the same, are appointed by the Cabinet, at the special request and recommendation of the Prime Minister.

### Article 24:

The Chairman of the Committee controls and supervises the business of the Committee; and, at the time at any conference he is to act as Chairman.

### Article 25:

In the Committee of Councillors, a Business Manager is appointed. He is nominated by the Cabinet, at the special request and recommendation of the Prime Minister.

The Business Manager attends to the adjustment of general business, under direction of the Chairman of the Committee.

### Article 26:

In the Committee of Councillors, Clerks are appointed. They are nominated by the Cabinet.

The Clerks attend to general business, under the direction of the higher authorities.

## APPENDED RULES

The present Regulations are put into force on the day of promulgation.

THE PERSONNEL

The President, Vice-Presidents and other members of the Board were appointed as follows:

President:

Viscount Shimpei Goto

Vice-Presidents and Directors:

Mr. Shunji Miyao

Mr. Kan-ichiro Matsuki

Chief Engineer and Director:

Mr. Rintaro Naoki

Director of the Board, and Chief of the Planning Bureau:

Mr. Hiroshi Ikeda

Director of the Board, and Chief of the Construction Bureau:

Mr. Riki Sano

Secretaries:

Mr. Shinji Sogo

Mr. Kiyoshi Kanai

” Takeo Hasegawa

Chief of the Land Readjustment Bureau (as an additional post):

Mr. Shunji Miyao

Chief of the Provision Bureau of Goods and Materials:

Mr. Kan-ichiro Matsuki

Chief of the Engineering Bureau (as an additional post):

Mr. Rintaro Naoki

Acting Chief of the Accounting Bureau:

Mr. Shinji Sogo

(N.B.—The date of these appointments was September 29, 1923)

Director of the Board, and Chief of the Land Readjustment Bureau:

Mr. Kennosuke Inaba

Engineer (as an additional post):

Mr. Enzo Ota

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### Engineers:

Mr. Hiroyoshi Yamada  
Dr. Ichita Kishi

### Relieved of their additional posts:

Mr. Enzo Ota  
" Shunji Miyao  
" Rintaro Naoki

(N.B.—The date of these appointments was October 6, 1923)

## ADVISERS AND COUNCILLORS TO THE BOARD

The appointments of advisers and councillors to the Board were formally announced on December 18, 1923, and their number reached over a hundred in all.

Below are the names of these advisers and the members of the committee of councillors:

### Advisers:

Mr. Sukehide Kabayama	Mr. Shosa Nakagawa
Dr. Joji Matsumoto	Mr. Kurahei Yuasa
Mr. Teizaburo Sekiya	Mr. Katsuo Usami
Mr. Tsuneo Matsudaira	Mr. Asakichi Yasukochi
Mr. Seiji Tsukamoto	Dr. Seiroku Honda
Mr. Teisuke Harada	Mr. Yonekichi Miyake
Mr. Hiroshi Ikeda	Mr. Sukihiko Niwa
Mr. Moto Nishino	Mr. Hampei Nagao
Lt.-General Issei Ugaki	Mr. Katsusaburo Watanabe
Lt.-General Nobuyoshi Muto	Mr. Hidejiro Nagata
Vice-Admiral Keisuke Okada	Mr. Toyotaro Yuki
Mr. Saburo Horiuchi	Mr. Tsuneta Yano
Mr. Kakusaburo Yamanouchi	Mr. Toyotaro Isomura
Mr. Yoichiro Akashi	Mr. Kyohei Kato
Mr. Eitaro Okamoto	Mr. Umekichi Yoneyama
Mr. Sadao Wakamiya	Mr. Shoichi Kirishima

### President of the Committee of Councillors:

Baron Yoshiro Sakatani

### Councillors:

Mr. Kazuyoshi Yamaji	Dr. Chuta Ito
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Baron Koi Furuichi	Mr. Noboru Okano
Lt.-General Gaishi Nagaoka	Viscount Masatoshi Okochi
Mr. Man-noshin Kamiyama	Mr. Motoji Shibuya
Mr. Ei-ichi Baba	Count Hirotaro Hayashi
Mr. Katsuo Usami	Mr. Toshitake Okubo
Baron Chuzaburo Shiba	Mr. Isamu Hiroi
Mr. Asakichi Yasukochi	Mr. Hisahiro Naito
Mr. Keizaburo Hashimoto	Mr. Kenzo Ikeda
Mr. Takio Izawa	Mr. Seki Hoshino
Mr. Katsusaburo Watanabe	Mr. Mataichi Fukuda
Dr. Masataro Sawayanagi	Mr. Ryozo Hiranuma
Viscount Kyoshiro Inoue	Dr. Hajime Seki
Viscount Takamasa Hachijo	Mr. Kan-nosuke Miyajima
Baron Goro Mori	Mr. Shintaro Ohashi
Dr. Ushisaburo Kobayashi	Mr. Kyoichi Kanbe
Mr. Shoichiro Yoshiue	Mr. Takashi Isaka
Mr. Toyosuke Hata	Mr. Yonejiro Ito
Mr. Sozaburo Sugiura	Mr. Sho Isobe
Mr. Tomitaro Hara	Mr. Katsujiro Ikeda
Mr. Hidejiro Nagata	Mr. Shozaburo Horie
Mr. Matajiro Koizumi	Mr. Eiji Ono
Mr. Yoshio Sashida	Mr. Jukuro Kadono
Mr. Sakutarō Koizumi	Mr. Chuji Kajiwara
Mr. Ichiro Hatoyama	Mr. Yasushi Kataoka
Mr. Ikuzo Wakao	Mr. Kenji Kodama
Mr. Kiyoshi Akita	Mr. Umekichi Kosaka
Mr. Shohachi Wakao	Mr. Shichiro Kojima
Mr. Tatsuji Kondo	Mr. Kusuyata Kimura
Mr. Bukichi Miki	Mr. Den-nosuke Kiuchi
Mr. Chuzaburo Ohama	Mr. Seiji Miyajima
Mr. Kaku Mori	Mr. Seisuke Ueno
Mr. Raita Fujiyama	

(N.B.—The date of these appointments was October 18, 1923)

Councillors (appointed temporarily):

Dr. Masaharu Anezaki	Mr. Genbei Hanai
Mr. Yoshikiyo Oshima	Mr. Ginzo Kato
Dr. Akitsune Imamura	

(N.B.—The date of these appointments was November 20, 1923)

Secretaries of the Committee of Councillors:

Mr. Kiyoshi Kanai

Mr. Takeo Hasegawa

## II. The Advisory Committee

The prime object in organizing the committee of Advisors in the "Board of Capital Reconstruction" was to maintain and preserve smooth and satisfactory relations with the Government Department concerned; and it was no mere advisory organ for the benefit of the President of the Board. The committee was, of course, to participate in the management and dispatch of the business of the Board, and also was authorized to present views and opinions, when required, which the President was to use for guidance and data in formulating final and definite plans for the Board.

The matters submitted to the consideration of the aforementioned Committee were to be as follows:

(1) Matters relative to the construction and provision of principal roads and streets, as well as their standardization.

(2) Matters relating to the situation of the buildings for public and Government Department, schools, markets, as well as Buddhist temples, churchyards and cemeteries; the policy to be followed in case of their removal; and the utilization of the land and sites vacated by them.

(3) Matters concerning the official indication of building lines and other matters respecting construction in general.

(4) Matters relating to control and direction of plans of reconstruction and the execution of reconstruction work.

(5) Matters relative to the sharing by public bodies concerned, in a proper and reasonable proportion, of the expenditures requisite for reconstruction undertakings to be carried out at the expense of the State, and the granting of a suitable subsidy, out of State funds, for realization of reconstruction enterprises conducted with the funds of the local authorities.

(6) Matters relating to the financial plans in connection with the reconstruction work.

## III. The Deliberative Committee

The matters referred to the consideration of the Committee of Councillors were as follows:

(1) Matters relating to the scope and extent of the plans of reconstruction and the scale of the reconstruction work.

(2) Matters relating to the control and supervision of reconstruction plans and the execution of reconstruction work.

(3) Matters concerning the division of expenses needed for reconstruction work, to be shared and borne by the different parties concerned.

## I

### MATTERS RELATING TO THE SCOPE AND EXTENT OF THE PLANS OF RECONSTRUCTION WORK

As regards the scope of the reconstruction plans, the town planning designed for Tokyo and Yokohama was to be generally adopted and followed as the standard model.

As to the districts to be marked out for reconstruction also the plan already determined was to be generally followed. Only the lessons furnished by the past experiences and the fearful consequences of the disastrous earthquake and fire were to be taken into serious consideration, and the exercise of special precaution and forethought was needed regarding future development and prosperity.

In outline, the scope thus decided was as below:

#### 1. Roads and Streets

In constructing and widening roads and streets, particular care should be taken for proper arrangement of trunk lines of traffic and communication. The standard width for principal roads and streets was fixed at from 27 metres to 54 metres, thus anticipating a time when high-speed street railway lines should be built. To supplement these main roads and streets, there were to be opened streets with a width of 10.91 metres or more. As to the standard width of the roads which should constitute a network of electric tramway lines, it was fixed at 20 metres or more. In determining the arrangement and the standard width of each road and street, special thought was to be given to the actual condition prevailing in the districts concerned, and also the state of traffic and the system of communication.

#### 2. Public Parks and Markets

The site and situation of public parks and markets were decided as below:

(1) Parks—Besides grounds owned by the Government or by public bodies, which were to be converted into sites for public parks, recreation grounds were to be laid out at several places. Moreover, the play grounds within

the compounds of the elementary schools standing in the districts swept by the earthquake fire were to be enlarged, as far as possible, so as to serve the purpose of a "children's public park."

(2) Markets—The Central Wholesale Market was to be erected on the chosen site at Tsukiji, which was owned by the Navy Department, while markets for vegetables and greens were to be built somewhere in the vicinity of Ryogoku and Akihabara railway stations.

### 3. "Fire Prevention Zones" and the Government Subsidy for the Construction of Buildings and Houses

As regards "fire prevention zones," the lines mapped out in the schemes and plans already formed were to be generally followed. Besides, along, or in the immediate neighbourhood of, the principal roads and streets as mentioned above, there were to be marked out "fire prevention zones." Especially in commercial or business centres, the "collective fire prevention zones" were to be sufficiently extended. As to the construction of fire-proof buildings within fire prevention zones, a Government subsidy was to be granted in some fitting way.

### 4. The Readjustment of Lands

Land readjustment should be carried out with respect to those lands or grounds which might decrease in value or utility as building sites, in consequence of the widening or new construction of roads and streets, or by necessity of the new circumstances of the locality concerned.

### 5. Harbours and Canals

The harbour of Yokohama was to be made the outer harbour of Tokyo city. Equipment should be provided for the construction of an inner harbour at the mouth of the Sumida River. And for ensuring perfect connection between those two harbours, and also for the purpose of promoting speedy development of the industrial and manufacturing districts lying along both sides of the stream, a great canal was projected to be cut between Tokyo and Yokohama. Besides, in order to increase facilities of water supply within the city, a project was formed for cutting a new canal, according to necessity, or to improve one already in existence. Also, a suitable warehousing zone was to be mapped out on the banks of the river.

## II

### MATTERS CONCERNING CONTROL AND SUPERVISION OF RECONSTRUCTION PLANS AND EXECUTION OF RECONSTRUCTION WORK

The control and unification of reconstruction plans for both Tokyo and Yokohama was all entrusted to the "Board of Capital Reconstruction" to ensure the maintenance of a more harmonious relation and conduct of the different schemes for reconstruction. And the more important requirements and undertakings, which formed the main or basic operations of the civic organism, that is to say, (a) the widening or new construction of principal roads and streets; (b) the construction of ports and harbours; (c) the cutting or riparian work of rivers and canals; (d) enterprises other than those already enumerated and which should be regarded as specially indispensable,—these undertakings were all to be executed by the "Board of Capital Reconstruction." But as for all other enterprises not mentioned above, they were to be conducted by the local public bodies concerned.

## III

### MATTERS RELATING TO DIVISION OF EXPENDITURE FOR THE EXECUTION OF RECONSTRUCTION WORK, TO BE SHARED AND BORNE BY THE PARTIES CONCERNED

The expenses for work to be effected by the State should be partially shared by the public bodies concerned, the proportion to be borne by them being determined according to the kind or nature of the work to be conducted. Again, as to undertakings by local public bodies, suitable monetary aid was to be granted by the Government out of State funds, in the form of subsidy, the sum being regulated according to the nature of the enterprises to be carried out.

To these propositions, the Committee of Councillors gave unanimous approbation, after mature deliberation, only with the following views and observations.

Concerning Roads and Streets:

(1) The facilities for underground railways within the city should be extended as much as possible, so that no section of the townspeople are excluded from enjoyment of the convenience afforded by this means of traffic.

(2) In framing plans for construction or improvement of roads and

streets, care should be taken that no obstacle may be created to the building of high-speed street railways.

(3) To carry into execution projects for the construction of radiating and circular road lines, as well as other road lines, as already determined as part of the intended town planning.

(4) As regards those roads and streets the improvement or construction of which is entrusted to the care of the State, the paving work, also, should be undertaken at the same time.

(5) To provide a square at the crossing of principal streets, and, also, at several suitable places, for the convenience of traffic, fire prevention, and public sanitation, and also for the decency of the general appearance of streets.

(6) To carry out the proper adjustment of underground structures and appliances.

#### Concerning Public Parks and Markets:

(1) To increase, as far as possible, the number of public parks and markets. As possible sites for projected public parks, the former sites of the Military Arsenal and the Army provisions Dépôt (for example), or the vacant plots stretching along the shores of the Sumida River, should be taken into special consideration.

(2) It is highly desirable that Government-owned lands should be placed at the free disposal of the Municipality for the sites of public parks.

#### Concerning "Fire Prevention Zones" and Subsidy for Construction of Houses and Buildings:

(1) The lines of construction fronting roads and streets, as well as the boundary lines of residential grounds, should be determined within six months. In the case of such lands as necessitate purchase, the transaction should be concluded within one year.

(2) The distance between the lines of construction should be 3.64 metres or more.

(3) For the purpose of affording monetary assistance to those who project the construction of "fire prevention buildings," a subsidy should be granted, and a law ruling the scheme or plan of such buildings should be enacted. It is desired that a total sum of not less than a 100,000,000 yen will be defrayed by the Government for the purpose of subvention.

#### Concerning Land Readjustment:

(1) As, in consequence of the land readjustment, a portion of the sites for roads and streets came to be appropriable without compensation, the ex-

penses thus saved should be applied to encouraging the construction of "fire prevention buildings" and of the more efficient execution of land readjustment.

(2) For the object of encouraging proper utilization of lands and, also, for minimizing inconveniences in the matter of public security and hygiene, the readjustment of land should be carried out thoroughly and vigorously, throughout those districts which were reduced to ashes by the earthquake conflagration. It is proposed that about 10 percent of the whole area to be subjected to the process of land readjustment shall be offered gratis by the owners, according to the contingency of the readjustment process, for the site of public parks or roads, or for other public purposes.

Desiderata: In order to facilitate operation of reconstructive town-planning and, also, to faster the financial resources requisite for the purpose, the Government-owned lands scattered both in the city and outside of it, will be subjected to proper adjustment; and, if possible, be opened to the general public or be handed over to the municipality.

#### IV. The Committee of Councillors

Meetings of the Committee of Councillors were summoned as frequently as required by circumstances, to consider various important problems concerning the reconstruction work. Views and opinions were also here exchanged on the basic principles to underlie the town-planning schemes, which were to form, indeed, the foundation of the Reconstruction Enterprise. What is, however, particularly worthy of mention here is the fact that the Budget of the prospective expenditures was introduced there for the Committee's deliberation, and the budget in accordance with the general policy of the Reconstruction Plan drawn up. It may be added that the grand total of the estimated expenditure was indeed no less than 1,300,000,000 yen.

#### V. Abolition of the "Board of Capital Reconstruction"

The Budget for reconstruction of the Capital was formally introduced for approbation at the 47th session of the Imperial Diet, which met on December 10, 1923, when a great amendment, however, was effected. In the original financial plan, the estimated total expenditure for the business proper was 22,931,000 yen; and the actual outlay in this connection was to be paid on demand, in annual instalments, according to the circumstance or progress of reconstruction undertaken. On this principle, therefore, in the Budget in question, the sum of 702,410 yen was included as the yearly instalment for the fiscal year concerned. But part of the expenditure for the reconstruction work was amended, while the business expenditure was struck off *in toto*.

The reason for this critical attitude of the Diet was that, for the execution

of the undertaking for which the Budget in question was brought up for sanction, there was no need, it was thought, for such an independent organ as the "Board of Capital Reconstruction," as there was already, indeed, such an authority as the Home Department, obviously suitable and highly efficient for satisfactory execution of such enterprise.

Naturally, this parliamentary amendment of the Reconstruction Budget was regarded, at first, with feelings of great apprehension, lest it should seriously interfere with the smooth conduct of the reconstruction schemes. But it seems that necessity of circumstances obliged the authorities concerned tacitly to acquiesce in, and comply with, the rectification thus effected.

### SECTION III

#### THE RECONSTRUCTION BUREAU

##### I. Official Organization

With the abolition of the "Board of Capital Reconstruction" on February 23, 1924, the scope and scale of the executive organ of the Reconstruction Work came to be greatly retrenched, and to supersede the same Board, we saw, soon after, the creation of a special Bureau attached, for the sake of convenience, to the Home Department, with the appellation of "Bureau of Reconstruction." This was, of course, the inevitable consequence of the amendment which the "Reconstruction Budget" underwent at the 47th session of the Diet, as already described in the foregoing paragraph. Accordingly, the Government faced the necessity of changing the fundamental policy laid down for the execution of the Reconstruction Work. In consequence, the whole enterprise of reconstruction was to be partitioned, in an appropriate way, among the parties concerned; that is, the State and the local public bodies alike, each being given share for the execution of which it was to be held responsible.

And so the new "Bureau of Reconstruction" was made to bear a portion, of the work as its due share, and the remainder was to be doled out for execution among the cities and prefectures concerned. As to the necessary expenditures, the Government was ready to extend a helping hand, in the shape of a subsidy to be paid out of the State funds, according to the kind and nature of the portion of the work to be carried out. On the other hand, the municipalities concerned were to be granted monetary aid from the Government, to meet the payment of interest on the public loan they might raise to replenish the funds for the work of reconstruction.

Now, the City of Tokyo, seeing the necessity of creating a special organ



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for the conduct of the undertaking, established a new office, named it the "Land Readjustment Bureau," which was later changed to "Bureau of Reconstruction Work," with the avowed duty of adjusting thoroughly the intricate and complex condition of lands and grounds within the City, veritabily the foundation work in the execution of the grand Reconstruction Plan. In effect, however, no serious alteration was introduced into the general policy of reconstruction, which was laid down, as the guiding principle, in the days of the defunct "Board of Capital Reconstruction." Only in consequence of the contraction of the Reconstruction Budget, the part of the undertaking at first planned as the share to be borne by the State alone now came to be divided between the State and the local public bodies concerned.

The following was the Official Organization of the "Bureau of Reconstruction":—(Promulgated by Imperial Ordinance No. 26, February 23, 1924)  
Article 1:

"The Bureau of Reconstruction" is under supervision of the Minister of Home Affairs, and attends to the business connected with town planning, the execution of town planning work, the enforcement of the Law of city house building in urban districts of Tokyo and Yokohama, and the improvement of buildings and structures, from the standpoint of town planning.

Article 2:

The personnel of the Reconstruction Bureau consists of the following:

1 Chief of the Bureau . . . . .	" <i>Choku-nin-kan</i> "
1 Chief Engineer . . . . .	"
4 Chiefs of Section . . . . .	"
10 Secretaries . . . . .	" <i>So-nin-kan</i> "
20 Commissioners . . . . .	"
127 Engineers . . . . .	"
(of the number, 7 may be accorded " <i>Choku-nin-kan</i> ")	
225 Clerks . . . . .	" <i>Han-nin-kan</i> "
650 Junior Engineers . . . . .	"

Articles 3:

The Bureau is organized under the Secretariat of the Chief and following four sections:

Section of Land Readjustment  
Section of Engineering  
Section of Construction  
Section of Accounting

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### Article 4:

The Chief Secretariat attends to business connected with matters of personal character; papers, documents and correspondence; town planning (except that directly related to practical engineering work); control and direction of town planning work; as well as those matters in general which do not fall within the duty of any of the four sections.

The Land Readjustment Section attends to business relating to the readjustment of lands, in consequence of the execution of town planning, as well as affairs connected with adjustment of grounds in general.

The Engineering Section attends to business relating to the execution of town planning and matters in general concerning practical engineering work necessitated by the conduct of town planning.

The Construction Section attends to business relating to the enforcement of the Law of city house building, as well as affairs connected with the actual architectural art, the improvement of buildings and structures, and public parks, from the standpoint of town planning.

The Section of Accounting has the duty of attending to affairs connected with estimates and budgets, balancing of accounts, and various other matters relative to accounting.

### Article 5:

The Chief controls and manages the business of the Bureau, under the direction and order of the Minister of Home Affairs, supervises and directs the officials under him, and conducts, at his own discretion, the movement of the bureau officials of "*Han-nin-kan*" and lower ranks.

### Article 6:

The Chief Engineer holds control and supervision of affairs relating to engineering.

### Article 7:

The Chief of the Section attends to and manages sectional business, by order of the Chief of the Bureau.

### Article 8:

The Secretaries and Commissioners participate in the dispatch of sectional business, acting under direction of the higher authorities.

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Article 9:

The Engineers attend to business relating to engineering, acting under the higher authorities.

Article 10:

The Clerks engage in the management of general business, acting under the direction of the higher officials.

Article 11:

The Junior Engineers engage in the management of engineering business, acting under the direction of the higher officials.

Article 12:

In the case of necessity therefore, the Minister of Home Affairs is authorized to establish a branch office of the Bureau and an engineering laboratory, and to have them participate in the business of the Bureau.

The aforesaid branch office and engineering laboratory are each placed under the Chief. The chief of the branch office is to be appointed from among the Secretaries, Commissioners, or Engineers of the Bureau, and that of the Engineering laboratory from among the Engineers.

Appended Rules:

The present Ordinance is put into operation on the day of promulgation.

The Secretaries, Commissioners, Engineers, Clerks or Junior Engineers of the "Board of Capital Reconstruction," who actually hold official posts appertaining to them, at the date of the promulgation of the present Ordinance, may consider themselves appointed Secretaries, Commissioners, Engineers, Clerks or Junior Engineers of the "Bureau of Reconstruction," of the same official rank and treatment, if not otherwise provided for.

The "Bureau of Reconstruction" attends to the business, not yet finished, relating to the enforcement of the Regulations concerning temporary provision of the goods and materials, in addition to the business mentioned in Article 1. The actual management of the aforementioned business is entrusted to the Section of Accounting.

N.B. The following amendment in the Official Organization of the Bureau was announced by Imperial Ordinance No. 42, September 18, 1924.

Appended Rules:

The present Ordinance is put into operation on the day of promulgation. Later, on April 25, 1925, the Official Organization of the Reconstruction Bureau was further amended by Imperial Ordinance No. 141.

In Article 2, "20 Commissioners" to "25 Commissioners." Again, by

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Imperial Ordinance No. 318, December 20, 1924, the following amendment was announced:—

In Article 2, The Chief Engineer of "*Choku-nin-kan*" is expunged:

"10 Secretaries" is changed to "9 Secretaries,"

"25 Commissioners" is changed to "22 Commissioners,"

"127 Engineers" is changed to "122 Engineers,"

"650 Junior Engineers" is changed to "610 Junior Engineers."

In Article 2, "225 Clerks" is changed to "275 Clerks."

Appended Rules:

The present Ordinance is put into operation on the day of promulgation.

On September 17, 1924, again, the following amendment was effected in the same Official Organization by Imperial Ordinance No. 284.

In Article 4, "2 Advisers" may be appointed in the "Bureau of Reconstruction," in order to have them afford assistance in dispatch of business.

The aforesaid Advisers are to be nominated by the Cabinet from among persons noted for learning and wide experience, at the request and recommendation of the Minister of Home Affairs.

These Advisers are accorded the treatment due to Government Officials of "*Choku-nin-kan*."

Appended Rules: The present Ordinance is put into operation on the day of promulgation.

Principal officials: The following were the chief officials of the Bureau from its first establishment till the abolition of the Official Organization of the same Bureau.

Office	Official	Tenure of Office
Chief of the Bureau and Chief Engineer . . . . .	Rintaro Naoki	1 year 8 months from Apr. 23, 1924 to Sept. 16, 1925
Chief of the Bureau . . . . .	Chotaro Kiyono	1 year 1 month from Sept. 16, 1925 to Sept. 15, 1926
Chief of the Bureau <i>ad interim</i> . . . . .	Takukichi Kawasaki	1 month from Sept. 15, 1926 to Sept. 28, 1926
Chief of the Bureau . . . . .	Zenjiro Horikiri	2 years 8 months from Sept. 28, 1926 to Apr. 26, 1929

# OFFICIAL ORGANIZATION FOR RECONSTRUCTION OF THE CAPITAL

Office	Official	Tenure of Office
do	.....Nozomu Nakagawa	9 months from July 5, 1929 to Mar. 31, 1930
Chief of Land Readjustment		1 year 8 months
Section . . . . .	Ken-nosuke Inaba	from Feb. 25, 1924 to Sept. 8, 1925
Acting Chief of Land Read-		1 year 11 months
justment Section . . . . .	Shigeru Yoshida	from Sept. 8, 1925 to Dec. 11, 1925
Chief of Land Readjustment		
Section . . . . .	do	from Dec. 11, 1925 to July 19, 1927
do	.....Tohei Marumo	7 months from July 19, 1927 to Jan. 10, 1928
do	.....Shinobu Agata	1 month from Jan. 10, 1928 to Jan. 24, 1928
do	.....Yasunori Yamaguchi	6 months from Jan. 24, 1928 to June 29, 1928
do	.....Hirotaro Tanaka	1 year from June 29, 1928 to May 3, 1929
do (as additional duty)	Asaji Akagi	5 months from May 3, 1929 to Sept. 10, 1929
Chief of Engineering Section . .	Enzo Ota	2 years 2 months from Feb. 25, 1924 to Mar. 31, 1926
do	.....Daizo O-oka	4 years from Apr. 30, 1926 to Mar. 31, 1930
Chief of Construction Section . .	Toshiro Kasahara	5 years 10 months from June 20, 1924 to Mar. 31, 1930

## THE RECONSTRUCTION OF TOKYO

Office	Official	Tenure of Office
Chief of Accounting Section . . .	Shinji Sogo	7 months from Feb. 25, 1924 to Aug. 16, 1924
do . . . . .	Koichiro Sasai	2 years 10 months from Aug. 16, 1924 to May 17, 1927
do . . . . .	Asaji Akagi	2 years 5 months from May 17, 1927 to Sept. 10, 1929
Chief of Accounting Section . . .	Tetsuzo Yoshimura	7 months from Sept. 10, 1929 to Mar. 31, 1930

### II. Outline of Reconstruction Activities

Land Readjustments: As frequently mentioned above, the work of land readjustment, constituted the real foundation and basis of the whole enterprise of reconstruction. In executing the work, it was made the general principle that roads and streets, squares, canals and creeks, and all sorts of lands which became amenable to use for public benefit, in consequence of the execution of the plan for land readjustment, should be looked upon as belonging to the ownership of the State or the public body concerned, according to the circumstances. Again, it was provided that if, as the result of the execution of land adjustment, the area of residential land thus adjusted should be found, after the adjusting process, reduced by more than 10 percent of the original dimension, compensation should be granted, according to the provisions of the Imperial Ordinance concerned, for that portion exceeding the said ten percent, thus aiming at equitable protection of the rights and interests of the owners of the lands and of other persons. In fact, the great end and aim of the land adjusting project was to amend the intricate and complex condition of the boundaries of lands and grounds within the city, which had hitherto been really a veritable tangle and confusion defying all attempts at rectification, and consequently to promote the reasonable utility of lands. On the other hand, the land readjusting scheme was expected to contribute very much to a satisfactory execution of the project concerning construction of roads and streets, the excavation of canals and creeks, as well as the laying out of public parks.

The whole area of lands in Tokyo to be submitted to the process of land adjustment amounted to 30,413,223.13 square metres out of 34,669,322.30 square metres, the figures representing the total area of lands reduced to ruins

by the Earthquake conflagration. This land adjustment area contained 23,476,316.62 square metres of residential lands, divided into 65 sections for the sake of convenience. Of these 65 sections, 15 (containing 4,730,578.51 square metres of residential land) fell to the share of the State for execution of readjustment, while the remainder,—50 sections covering 18,409,917.35 square metres of residential lands,—devolved on the Municipality as its own share of the work to be carried out.

Roads and Streets: In Tokyo city, roads and streets were divided into two kinds; trunk lines and auxiliary lines. The standard width of the trunk lines was fixed, with exceptions, at 22 metres or more, according to actual conditions of traffic and communication and the prevailing state of things in the districts concerned, particular care being taken about proper distribution and arrangement of trunk lines of roads. To supplement the trunk road lines, there should be provided auxiliary road lines with a width of 11 metres or more, thus to ameliorate and perfect the system of traffic and communication after the Earthquake disaster. All projected trunk lines, 52 in number, were to be executed by under the direction and at the expense of the Government, while the city of Tokyo was required to see to the construction of all auxiliary road lines.

Further, in Tokyo there were to be provided, in the localities where land adjustment was carried out, what were styled “land readjustment roads or streets,” branching off or radiating in all directions, in addition to the aforementioned trunk and auxiliary lines. These “land readjustment roads or streets” were to be built by the Government within the 15 sections mentioned above, but in all the remaining sections the Municipality of Tokyo was to be held responsible for the construction of such roads or streets.

Rivers and Canals: The development of a city, it need scarcely be said, depends, in large measure, upon the facilities for transportation by water. Therefore, while great attention was paid to the improvement and higher efficiency of various kinds of machinery for land communication and traffic, the better equipment and greater facilities of transportation by rivers and canals had to have due attention from the authorities interested, in order to ensure the promotion of conveniences for better collection and distribution of goods, by improving those rivers and canals already in existence and hitherto utilized, specially cutting new ones or reclaiming land at some points of those water-courses.

The project formed for this part of the work of reconstruction to be executed in Tokyo city, contained the following items:

Excavation of new canal . . . . .	1
Alteration or improvement of rivers and canals . . . . .	11

## THE RECONSTRUCTION OF TOKYO

Reclaiming of river-land . . . . .	1
Alteration or improvement of outer moats surrounding the Imperial Palace . . . . .	4

Bridges: Bridges are an inalienable accompaniment to roads and streets, rivers and canals. Bridges to be undertaken by the State, at its expense, were as follows:

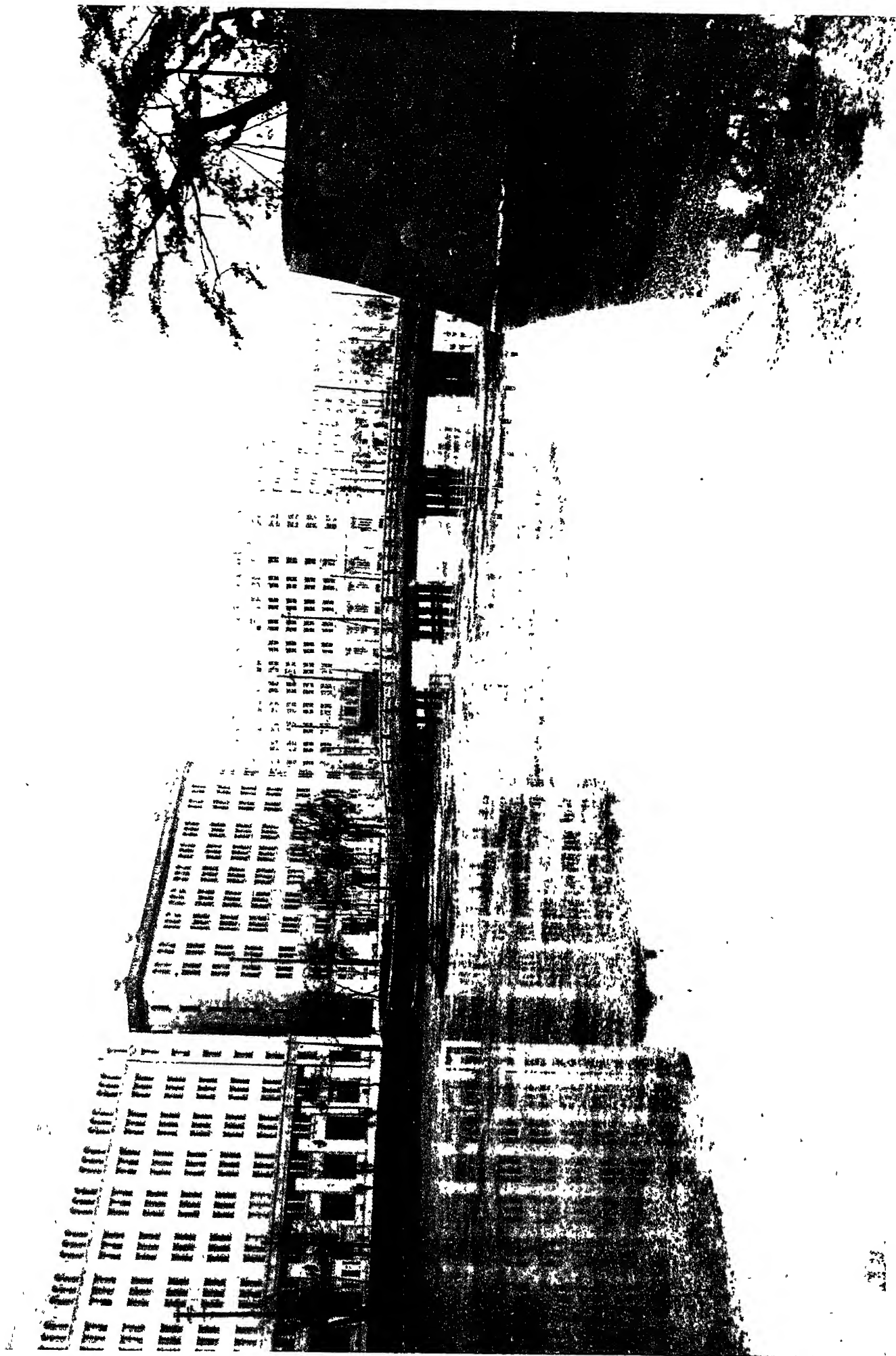
The construction necessitated in consequence of new trunk lines opened . . . . .	96
In consequence of improvement of rivers and canals . .	15
In consequence of a new "land readjustment road" opened . . . . .	1
Total . . . . .	112

Very careful and thorough-going geological investigation and land surveying were indispensable for the work of bridge construction, as it has an absolutely inseparable relation to the geological state of the ground upon which the foundation of the bridge is to be laid. And it was decided to commence work first on those bridges which might be found, in consequence of the actual survey, to be comparatively easy of execution.

Public Parks: Hitherto, the public parks in the city had been very unsatisfactory in point of equipment; and, moreover too few in number. In view of the valuable lessons taught by the Earthquake and Fire Disaster, it was deemed wise and convenient to make their distribution general and uniform. Consequently, in Tokyo, three large public parks were decided to be newly laid out at the expense of the State. Further, it was determined to have the Municipality to provide, at its own expense, 52 smaller public parks at several places in the city, and to have them attached to the primary schools concerned.

The Government's subvention for buildings and constructions in "fire prevention zones": Viewed from the point of fire prevention in a city, it is highly essential and politic, for purposes of public security, to indicate and mark out what is called "fire prevention zones" in any shape or form thought suitable, at proper points in the civic centre of great cities, where buildings and structures should be required to be only of non-inflammable materials. But as a matter of fact, it might be next to impossible to realize this, especially at a time of straitened financial conditions immediately after the Earthquake calamity, unless and until the Government would grant, in some acceptable way, a subsidy to those going to construct fire-proof buildings within the "fire prevention zones." Therefore, in order to attain this object in any satisfactory measure, the authorities set aside, in the "Reconstruction Budget," a sum of 20,000,000 yen to be used for this purpose, both in Tokyo and Yokohama.





“Marunouchi” as seen from outer moat surrounding the Imperial Palace



Poor sufferers in the rain at Nihon-bashi Bridge: A miserable memory of the citizens of Tokyo



Nihon-bashi Bridge as seen to-day.

The maximum amount of the "fire prevention building subsidy" was fixed at approximately one-half of the difference between the prospective cost of a fire-proof building and that of a building of the ordinary type. But this was only a general rule, and some exceptions were to be naturally made according to the sort of buildings to be considered.

To be more precise, the following are some of the main points which were to serve in determining the sum of subsidies to be granted:

The amount of subsidy to be granted to be fixed in the manner mentioned below, according to the kind of use and construction of the buildings concerned.

(1) Ordinary buildings: (a) In case the outer walls, floors and pillars are made fire-proof, a sum of 50 yen or less per *tsubo* (3.31 square metres). (b) When the outer walls alone are made fire-proof, a sum of 40 yen or less per *tsubo*.

(2) Theatres, cinema halls, variety houses, ordinary halls, public auditoriums, hotels, lodging-houses, dormitories, public houses, permanent exhibition buildings, department stores, bazzars, etc., automobile garages, warehouses, and all other kinds of "special structures" so-called: A sum of 20 to 30 yen per *tsubo*, according to the size and dimensions as well as the capacity of the buildings concerned.

(3) Many-storey buildings: As to those buildings which exceed 15.15 metres below the eaves and 19.70 metres in entire height, 50 yen or less per *tsubo* for the whole area of the floors up to the height of 13.64 meters above the basement.

## SECTION IV

### COMMITTEE FOR SPECIAL CITY PLANNING

In consequence of promulgation of the Law relating to special town planning, the official organization of the Committee for special city planning was announced on February 9, 1924. The Committee was placed under control and supervision of the Minister of Home Affairs; and its duty was to deliberate on and investigate various matters and affairs necessary in the execution of the reconstruction schemes and other matters referred to it for investigation, in accordance with the laws and regulations; and, also, to present views and opinions upon matters referred to it for deliberation by the Ministers of the different Government Department concerned with the work of reconstruction; and further it was authorized to make various propositions to the authorities concerned, at its own discretion. It consisted of a President and members, not more than sixty in number. In cases of a particularly important nature, it was permitted to

organize an extraordinary Committee, in addition to the ordinary Committee mentioned above. The post of chairman of the Committee was occupied by the Home Minister himself, while the members of the Committee were composed of the Chief of the Metropolitan Police, the Governors of the prefectures interested, the Mayors of the cities concerned, some higher officials of the Government Departments which were specially interested in the reconstruction undertaking, some of the members of the various local Assemblies, and members of the two Houses of the Imperial Diet and persons noted for erudition and wide experience, who should be specially chosen and recommended to the Cabinet by the Home Minister. The permanent executive Committee, however, was organized by a certain number of men specially nominated by the Chairman of the aforementioned Committee.

Official Organization of the Committee for Special City Planning

(Imperial Ordinance No. 14, February 1, 1924)

Article 1:

For the purpose of the town planning enterprise for Tokyo and Yokohama, the Special City Planning Committee shall act as the Committee for City Planning.

The above mentioned Committee for special city planning is placed under direction and control of the minister of Home Affairs, and is charged, as its proper duty, with the investigation and deliberation of those matters prescribed by laws and regulations as belonging to its jurisdiction and, also, of various other matters necessary in the execution of the town-planning enterprise in Tokyo and Yokohama.

Article 2:

The Committee for Special City Planning offers its views and opinions on matters connected with town planning, referred to it by the Ministers of the different Government Department concerned, and at the same time, it is authorized to make its own proposals.

Article 3:

Those matters connected with town planning in Tokyo and Yokohama, and which are required to receive the decision of the Committee for town planning, are to be submitted, by the Home Minister, to the deliberation of the Committee for Special City Planning.

If there be any need therefore, the Minister of Home Affairs is authorized to submit to its further deliberation those matters which have already undergone the deliberation of the Committee.

Article 4:

The Committee is composed of the Chairman, and members not more than sixty in number.

Article 5:

The Minister of Home Affairs is to act as Chairman of the Committee. The members of the Committee are taken from persons mentioned below:

- (1) Higher officials of the different Government Department concerned.
- (2) The Chief of the Metropolitan Police and the Governors of Tokyo and Kanagawa Prefectures.
- (3) The Mayors of the cities of Tokyo and Yokohama.
- (4) Members of the Prefectural Assemblies of Tokyo and Kanagawa Prefectures, and members of the Municipal Assemblies of the cities of Tokyo and Yokohama.
- (5) Members of the two Houses of the Imperial Diet.
- (6) Persons in general noted for erudition and extensive experience.

Except the members mentioned under No. 2 and No. 3 above, all members are to be appointed by the Cabinet, on the special recommendation of the Minister of Home Affairs.

Those members mentioned under No. 2 to No. 4 above are excluded from participating in the deliberation of matters which have no interest for the Cities or Prefectures they represent.

It is provided, however, that, in case the Chairman should think fit, the provisions of the foregoing paragraph need not be applied.

If those persons mentioned under No. 1 to No. 3 of the foregoing paragraph, should be prevented from duly discharging their proper duties persons specially nominated for this purpose are permitted to take part in the deliberations, and are also authorized to have a voice in making decisions.

Besides the Committee specially appointed in accordance with the provisions of the foregoing paragraph, it is permitted to appoint a temporary committee, if there should occur any need therefore. The aforesaid temporary committee is to be appointed by the Cabinet, on the recommendation and request of the Minister of Home Affairs. The provisions of paragraph No. 4 are applicable also to the case of the temporary Committee mentioned in the preceeding paragraph.

Article 6:

The Chairman of the Committee has the general control and supervision

## THE RECONSTRUCTION OF TOKYO

of the business of the Committee.

In case the Chairman should be prevented from performing his proper duties, a member of the Committee is specially nominated by the Minister of Home Affairs to act as proxy of the Chairman.

### Article 7:

The Committee is authorized to order the Prefecture, City, Town, or Village concerned to make, within the prescribed period, if there should be any need therefore, investigations concerning specified things connected with the town-planning project in Tokyo and Yokohama, or to present necessary papers, documents, etc.

The Committee is also authorized to despatch to Tokyo and Yokohama members of the Committee, or those of the temporary Committee, for the purpose of conducting personal inspection of the actual condition and progress of the town planning enterprises in those cities.

### Article 8:

The Committee is to meet for deliberation at the summons of the Chairman.

The Chairman of the Committee shall inform, at least three days previous to the meeting to be held, the members of the Committee or of the temporary committee of the convocation, and the subjects for deliberation to be submitted to the conference. It is provided that, in case of special urgency, the provisions of the preceding paragraph need not be complied with.

### Article 9:

Unless it be attended, at least, by half the number of its members, the Committee or the temporary Committee cannot hold its conference.

### Article 10:

The Chairman of the Committee is to act as Chairman of the conference. Matters submitted to the conference for consideration and discussion are to be decided by an absolute majority of the members of the Committee or of the temporary Committee, who are actually present at the conference. In case of a deadlock, the Chairman has the casting vote.

### Article 11:

A standing business committee is appointed in the Committee, whose duty is to act by authorization, to attend to the despatch and management of affairs of minor importance, which come within its province.

The standing business committee is composed of a certain number of

the members of the Committee, specially nominated by the Chairman of the Committee.

The Chairman of the Committee is authorized to order the standing business committee to conduct a preliminary investigation of matters to be later submitted to the consideration of the regular Committee.

The provisions of paragraphs No. 4 and No. 5 of Article 5 and Paragraph No. 1 of Article 8, as well as the provisions of Article 9 and the preceding Article, are also applicable to the case of the standing business committee mentioned above.

Article 12:

A certain number of business managers are appointed in the Committee. They are to be appointed by the Cabinet on the special recommendation and request of the Minister of Home Affairs.

The business managers mentioned above attend to the despatch and management of general business, under direction and order of the Chairman of the Committee.

Article 13:

A certain number of clerks is appointed in the Committee. They are appointed by the Minister of Home Affairs.

The clerks attend to the despatch and management of general business under direction and order of the higher officials.

Appended Rules: The present Regulations are put into execution on the day of promulgation. For the present, the term "Minister of Home Affairs" in the present Ordinance, is to be superseded by the term "Prime Minister," except in paragraph No. 1 of Article 5.

THE COMMITTEE FOR SPECIAL CITY PLANNING

An Amendments in the Official Organization Thereof

(Imperial Ordinance No. 48, March 12, 1924)

Paragraph No. 2 of the Appended Rules in the Official Organization of the Committee for Special City Planning, is expunged.

Appended Rules: The present Ordinance is put into force on the day of promulgation.

The Chairman and members of the Committee: The number of the members of the two Committees, together with the Chairman, reached more than 200 in all, through the entire period of their existence. We mention below only the names of those persons who served as Chairman at one time or another:



# THE RECONSTRUCTION OF TOKYO

Official Post	Person	Tenure of Office
Minister of Home Affairs . . . . .	Rentaro Mizuno	5 months from Feb. 2, 1924 to June 11, 1924
do . . . . .	Reijiro Wakatsuki	2 years from June 11, 1924 to June 3, 1926
do . . . . .	Yuko Hamaguchi	11 months from June 3, 1926 to Apr. 20, 1927
Prime Minister <i>ad interim</i> and Minister of Communication .	Kenzo Adachi	1 year 2 months from Nov. 16, 1926 to Mar. 15, 1927
Minister of Home Affairs . . . . .	”	8 months from July 2, 1929 to Mar. 31, 1930
do . . . . .	Dr. K. Suzuki	1 year 2 months from Apr. 20, 1927 to May 4, 1928
do . . . . .	Baron G. Tanaka	1 month from May 4, 1928 to May 23, 1928
do . . . . .	Keisuke Mochizuki	1 year 3 months from May 23, 1928 to July 2, 1929





Kudan Road wholly decorated with cherry blossoms



Hibiya Road with green platan trees



An attractive scene, Take-bashi Bridge, Kojimachi ward



Honjo municipal public hall and its garden, Honjo ward

## CHAPTER II

### Imperial Diet and Scheme for Reconstruction of the Capital

#### SECTION I

##### GENERAL OUTLINE OF DELIBERATIONS IN THE 47TH SESSION OF THE IMPERIAL DIET

On December 10, 1923, the 47th extraordinary session of the Imperial Diet was convened, for the purpose of obtaining the necessary sanction and approval for the reconstruction of the Capital. On 11 following, at the ceremony of opening the session, His Majesty the Emperor was graciously pleased to grant an Imperial Edict, the gist of which reads as follows:—

“We hold here the ceremony of opening the session of the Diet, and announce to all members of both Houses of the Diet, that:

“It is a very gratifying to Our mind that, in the present disaster, both the Government and the people, uniting their efforts and energies, exerted themselves in the work of helping and relieving the distressed, thus revealing the spirit of mutual brotherly love. At this time of national disaster, all the nations of the world also showed great sympathy and hearty help, which fact deeply impresses Us especially.

“We order the State Ministers to introduce into the Imperial Diet Bills for the Supplementary Budget, which is urgent and inevitable, and also those for the necessary Laws.

“We hope that you will lay to heart the real spirit of Our purpose, and, making deliberations in an harmonious and conciliatory attitude, will endeavour to perform and discharge your proper duty.”

On the following day, 12 of December, 1923, the House of Representatives held a regular and plenary session. Before entering upon the order of the day, the President of the House proposed a motion to the effect that the House should elect some suitable persons from among themselves and have them, as formal procedure backed by unanimous support, pay their respects to His Majesty and the different Princes of the Blood, on behalf of the House.

This motion was at once passed, all the members rising in their seats. Then, the order of the day being slightly changed, the proposition was brought

up for consideration, that a profound sense of sympathy for those people, both native and foreign, who suffered distress in the Earthquake Disaster, should be properly expressed, and especially for the relatives of those who lost their lives; a due expression of condolence should be made, and thanks should be returned, formally and publicly, by the House, for the manifold expressions of heart-felt sympathy shown by the different foreign countries in connexion with our affliction from the Earthquake Calamity. Of course, the resolution was unanimously passed. It may be added that the House of Peers, also, passed a similar resolution.

The Session of the House on the next day, 13 of December, was opened with a speech by Count Gon-no-hyoye Yamamoto, Premier, who spoke in the following strain.

"In obedience to the command in the Imperial Rescript, which was graciously granted to the Imperial Diet by His Majesty the Emperor, on the occasion of its opening ceremony, the responsible authorities at once took steps to establish two new organs for coping with the gigantic work of reconstruction in Tokyo and Yokohama, known as "Board to Consider the Reconstruction of the Capital," and "Board of Capital Reconstruction," respectively. By these organs, the authorities hoped and intended, the Count said, to restore the two great cities to their former state of magnificence and prosperity, by forming definite plans and having, of course, due regard to their marked development in the future. And, in the actual work of reconstruction, the Premier emphasized that preference should be given to substantial solidity rather than to mere superficial beauty and attractiveness of exterior, so that the daily life of the city people should be served sufficiently and satisfactorily. However, the Count proceeded, accurate measure must be first taken of the real financial resources of the State and the economic strength of the people, so that the limits should never be exceeded where power of bearing the financial burden should cease, in framing plans for speedy construction of the City based on the solid foundation of orderliness and convenience. With this preamble, the Premier explained the reasons which necessitated the introduction into the Diet of the Supplementary Budget, as well as the Bills for new enactments and regulations. The rostrum vacated by the Prime Minister was then occupied by Mr. Junnosuke Inoue, Finance Minister, who at once proceeded to an explanation of the necessity for the expenditures on reconstruction of the Capital, as included in the Supplementary Budget for the fiscal year of 1923-1924 (Vide sub.). After these speeches by the two State Ministers, the House set about the regular business of deliberating on plans for the restoration of the Capital and the manifold details connected with the Reconstruction Work. Later on,

we shall give a summary account of the proceedings in the Diet in connexion with this.

## SECTION II

### LAWS RELATING TO RECONSTRUCTION OF THE CAPITAL

The final Version of the "Law relating to Special City Planning," and various other laws and regulations connected with the city reconstruction enterprises, took, in fact, six sessions of the Imperial Diet; for it was at the 47th session of the Diet that they were first introduced for deliberation, and it was in the 52nd session that definite shape and form was finally given them.

In the following pages, we shall give a short account of the most important of the Special Ordinances:

(1) Law relating to Special City Planning: (Law No. 53, 1923)

For the town planning in Tokyo and Yokohama, the more severely afflicted victims of the Earthquake, a special Law was enacted, named Law relating to Special City Planning. This special treatment of those two cities, in the matter of city planning, is explained by the facts that the town planning law hitherto in force had not been framed and enacted in anticipation of natural calamity on such a colossal scale as the present one; that the plan of reconstruction for those cities was to be put into practical execution, chiefly by means of land readjustment, so that the rules and regulations concerning the adjustment of lands should be sufficiently supplemented and perfected; and finally that completion of the reconstruction undertaking must needs be expedited.

The Law in question was at first introduced into the Imperial Diet under the name: Law of the Imperial Capital Reconstruction. But to this appellation there was some opposition. However, with a few amendments the Law came to be promulgated under the title: Law relating to Special City Planning. The basic points of the Law in question may be stated as follows:

(a) As for the reconstruction undertakings to be conducted under State auspices, the necessary expenditure should be mainly borne by the State itself, and only a portion of it should fall to the share of the municipality. (Article 2 of the said Law)

(b) In view of the Special character of the land readjustment plan in town districts, even sites for buildings may be included in the districts marked out for operation of the land readjustment process, the explicit consent thereto on the part of the owners of buildings being not necessarily required. (Article 3)

(c) If, in consequence of the adjustment of lands conducted by the Administrative Authorities or by a public body, the lands should be available for the purpose of public goods and utility; e.g. for making roads and streets, or squares, or cutting canals and creeks, etc.; those plots of land may be included in the lands owned by the State or the public body which is to bear the expenditure required for the conduct of land readjustment; and as to the consequent diminution of the area of residential ground (Art. 7), an indemnity may be granted for a portion of the grounds exceeding 10 percent of the original area before the execution of the readjustment (Art. 8).

(d) If such a process should be necessary, as the result of the execution of land readjustment, it is permissible that a plot of land should be indicated for removal, and an order be issued for transference of houses, buildings, and other structures (Art. 6).

(e) The plans and projects, the exchange of lands, as well as the division of the indemnity for the execution of land readjustment, conducted by the Administrative Authorities or by a public body, the Committee for Land Readjustment, organized by land-owners and lessees of land, may be consulted for its views and opinions (Art. 5).

## (2) Law concerning Public Loans for the Relief of the Disastrous Consequences of the Earthquake: (Law No. 56, 1923)

As it was impossible to defray out of the ordinary financial sources of the States the expenditure needed for the execution of the reconstruction scheme, it was found unavoidable that recourse should be had to public loans in order to obtain the necessary funds. For this purpose alone, the present Law was framed and enacted. The original draft of the Law permitted the flotation of public loans to the maximum limit of 598,000,000 yen; but, in consequence of the contraction of the "Reconstruction Budget" later, this maximum amount of loans to be raised was amended accordingly. In brief, the question was solved in the following manner:

"Article 1: To meet the expenditure necessitated by the work of reconstruction, in consequence of the Earthquake Disaster, the Government is authorized to raise public loans, or to float new loans for the purpose of conversion, to the maximum amount of 468,500,000 yen."

"Article 2: In case there should be the necessity of supplying a deficiency resulting from the difference between the actual value and the denominational value of the public loans floated in accordance with the provisions of the preceding Article, it is permissible to raise public loans or to get loans, even exceeding the maximum amount mentioned in the foregoing Article."



We may state here, in passing, that, by Law No. 13, 1924, the aforesaid maximum amount of 468,500,000 yen was amended to 1,073,000,000 yen.

- (3) Law concerning the payment, in State bonds, of the money to be defrayed by the authorities, in consequence of the execution of the reconstruction enterprises, etc.: (Law No. 55, 1923)

As the inevitable result of the reconstruction undertakings, the amount of money the Government would have to pay to owners of land, land lessees, tenants of houses, etc., would be necessarily large, the Government saw fit to enact a law whereby it would be allowable to pay the money by means of State bonds instead of in cash, thus hoping to achieve a twofold policy; that is, to prevent, on the one hand, inflation of currency, and, on the other, to regulate and control the flotation of Government loans. This was the genesis of the Law in question. Salient points of the Law:

(a) By this enactment, it becomes permissible to pay, by means of the 5 percent interest-bearing Government bonds, the indemnity, or other money, payable to owners of land and other persons interested, in pursuance of the provisions of the Imperial Ordinance concerned, as a result of the execution of the reconstruction scheme.

(b) Therefore, the Government is authorized to raise public loans to a maximum amount to be naturally regulated by the amount of money to be paid for the reason mentioned above in (a). It was out of the question that the restriction ordained by the "Law concerning Public Loans for the Relief of the Disastrous Consequences of the Earthquake," should be equally applicable to the present case.

- (4) Imperial Ordinance concerning diminution or exemption of taxes. (Imperial Ordinance No. 410, 1923)

This Law was for the purpose of furnishing relief and aid for those taxpayers who had lost, in whatever degree, the power of bearing the burden of taxation, in consequence of the Earthquake Disaster. The following are the more important points of the Law:

(a) The Government may allow exemption or diminution with regard to the "3rd class Income Tax" and "Business Tax," both payable in the course of 1923 in the case of tax-payers who have suffered more or less from the Earthquake and Fire, due regard being, of course, taken to the actual state and extent of the damage inflicted.

(b) The Government is authorized to allow grace as regards payment of "Land Tax," "Income Tax," "Business Tax" and "Succession Tax," all payable in the course of 1923, in the whole area of earthquake-afflicted localities.

- (5) Law concerning exemption from "Land Tax" in the earthquake-visited districts: (Law No. 4, 1924)

The principal points of the Law follow:

(a) For those lands which had lost, or were diminished remarkably in usefulness or utility, exemption from payment of "Land Tax" might be allowed within five years from 1923.

(b) The Government might grant grace, in the earthquake devastated localities, for payment of the "Land Tax," "1st class Income Tax" and "Succession Tax," due after September 1, 1923.

- (6) Law concerning tax-payment as the essential condition and qualification required by the Laws and Regulations concerned, in the discharge of public functions, etc., by those persons who had taxes payable by them diminished or exempted:

As a result of exemption or diminution of taxes (Law No. 54, 1923), (Law No. 5, 1924), payable by sufferers from the Earthquake, by the Government and the local public bodies, the number of such persons had come to show a decided increase; and all these thus lost their civic rights in city, town, or village, including the right of electing members of the different public Assemblies; that is, for the House of Representatives, Prefectural, Municipal, Town, or Village Assembly, and the right of eligibility; for all of which rights tax payment is an essential condition. To rectify this undesirable state of things, was the sole *raison d'être* of this enactment.

The points which deserve special attention are as follows: The following taxes were to be regarded as diminished or wholly exempted, with regard to the tax-payment as the essential qualification required by the Laws in the discharge of public functions, etc.:—

(a) The "Income Tax" and "Business Tax" which were diminished or lifted, in accordance with Imperial Ordinance No. 140, 1923.

(b) The "City, Town, or Village Taxes," as the "additional tax" annexed to the taxes mentioned in (a) above.

(c) The "City, Town, or Village Taxes," as the "additional tax" annexed to the "direct prefectural or municipal Tax" diminished or lifted, in consequence of the Earthquake Disaster.

(d) All other kinds of "direct City, Town, or Village Taxes" diminished or lifted, in consequence of the Earthquake Disaster.

(e) The "Land Tax" as lifted, in consequence of the Earthquake Disaster.



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### (7) Law concerning the unnamed Government bonds lost in consequence of the Earthquake and Fire: (Law No. 14, 1924)

This Law provides, among other things.

(a) That as regards those unnamed Government bonds which were lost or destroyed in the Earthquake and Fire, the owners might present a request to the "Committee for investigation of matters connected with lost Government bonds," within three months (six months for persons residing abroad) after the coming into operation of the present Law, for proper investigation and decision with respect to their bonds thus lost or destroyed.

(b) That to those persons who should get the decision of "destroyed," the Government might deliver new Government bonds, corresponding, in face value, to the bonds "destroyed."

Besides these Laws, there were enacted and promulgated various Laws calculated to cope with varied matters cropping up in this field as the aftermath of the great Earthquake. For brevity's sake, however, we give below only the names of the more important of such enactments:

Law concerning "Restoration Savings Debentures."

Law concerning temporary management of rentable lands and houses.

Law concerning transfer of State-owned lands within the compounds of Buddhist temples in the districts marked out for special city planning, etc.

Law concerning postponement of ney payable in consequence of liquidation, as the result of land readjustment prescribed in Article 5 of the Special City Planning Law.

Law concerning disposal of leased land within the "fire prevention zones."

Law concerning indemnities or mothe commencement of temporary buildings on those plots of land in Tokyo and Kanagawa prefectures where land readjustment had been already carried out, in consequence of the Earthquake Disaster, etc., etc., etc.

## SECTION III

### BUDGET FOR RECONSTRUCTION OF THE CAPITAL

#### 1. General Description

In the early stages of the "Board of Capital Reconstruction" the reconstruction scheme was on such a gigantic scale that it included not only plans for the improvement of construction of railways, canals and creeks, har-

hours, etc., but also the great projects of providing, in localities lying out side the fire-swept parts of the city as well as in all suburban districts, many and various facilities and conveniences derivable from the process of town planning. The original plan did not content itself with this only, but went still further and intended to carry out even new construction of the different Government Department buildings also; so that the Budget formulated was necessarily huge, ambitious and soaring, indeed, to figures of no less than 3,000,000,000 to 4,000,000,000 yen. Afterwards, however, it was decided that the kind of work to be effected by the different Government Departments, as part of their proper duty, should continue to be conducted by them as hitherto, without any change. Also, it was agreed that the scale of the reconstruction enterprise should be retrenched, as far as possible. Actuated by these ideas, the "Board of Capital Reconstruction" came to the resolution that no enterprise entailing a large amount of expenditure should be attempted: the radical adjustment of underground structures and fixtures, the building of high-speed electric tramways, the cutting of a canal connecting Tokyo and Yokohama, the work of harbour construction at the mouth of the river Sumida, should all be abandoned at least for the time being, if not for good. At first, the figures appearing in the General Reconstruction Budget, in which was included only the estimated expenditure for the work of improving the mouth of the river in question, as a preparatory step for construction of the projected Tokyo harbour, reached, in fact, approximately 1,300,000,000 yen. Later, however, in consequence of amendments introduced into the plan of reconstruction, the original Budget suffered appreciable retrenchment; and in the revised Budget, as submitted to the Councillor's conference of the Capital Reconstruction Board for preliminary inspection, the figures were found to have dwindled to some 750,000,000 yen. This Budget represented expenditure for the work to be executed under the Government. But, later, the Budget again underwent further amendment. And the expenditure for the reconstruction undertakings by the local public bodies came also to be included in it; various curtailments were effected, at the same time in various other respects, so that the budgetary plan which came up for the consideration of the Board to Consider the Reconstruction of the Capital, showed a grand total of about 702,000,000 yen, inclusive of outlays in the way of advances for facilitation of the work of local public bodies, the subventions, and the Government's monetary help in payment of interest on public loans incurred by them. Even the expenditure for undertakings to be carried out by the Government alone reached the big amount of nearly 550,000,000 yen. But the Board adhering to the principle of retrenchment, was firm in the contention that construction or improvement of roads and streets should be avoided or diminished as far as possible, and that the water supply and sewerage

works in Tokyo, and the work of readjustment of underground structures and fixtures, should be pushed on at Government cost, as a temporary measure. Besides these, several propositions were presented as desirable. After a series of discussions and considerations, the budgetary figures were finally settled at some 570,000,000 yen; and in this form, the Budget, thus passing through several stages, was at length ready for presentation to the 47th extraordinary session of the Imperial Diet.

In the Diet, however, an amendment was effected in the items for roads and streets as well as land readjustment expenses, in the Reconstruction Expenditure both for Tokyo and Yokohama, so that the Reconstruction Budget, in revised shape, as approved by the Diet, showed a grand total of 468,438,843 yen. Afterwards, however, there were several supplements and alterations made in the Budget, in consequence of which the figures swelled to 649,059,560 yen. Of this huge sum, the Government intended to claim 306,987,465 yen, for its own use, as expenditure for reconstruction enterprises to be undertaken in the Capital, on its own responsibility; 64,692,224 yen to be employed as advances to the Municipality and the Prefecture of Tokyo, in aid of reconstruction work to be effected by them; 154,800,213 yen to be used in the way of subsidies; 19,250,394 yen to be granted as aid in the payment of interest on the "Reconstruction loans" contracted by the City of Tokyo; and 18,000,000 yen to be expended as subventions to those who set up buildings within the "fire prevention zones,"—those expenditures, thus claimed by the Government, making, in aggregate, a total of 563,730,296 yen. The remainder—85,329,264 yen—was to be applied to the reconstruction expenditure both for Kanagawa Prefecture and the City of Yokohama. And the Prefecture of Tokyo framed its own reconstruction budget amounting to 22,004,036 yen, while a similar Budget of the City of Tokyo comprised a total of 343,324,614 yen. Thus, we see that the grand total of all the expenditure required for the great work of reconstruction of Tokyo City, reached 690,316,115 yen.

## 2. Deliberations at the Imperial Diet

### A. Budget for Reconstruction, as presented at the 47th Session of the Imperial Diet

In formulating the Budget for reconstruction of Tokyo, the Government took special care about the national finances of the Empire after the disaster from earthquake and fire. And it was only too natural that it decided to mark out, as worthy of first and immediate attention, those projects and enterprises which stood on the list as most urgent and indispensable. Also, it divided the

## THE RECONSTRUCTION OF TOKYO

work into two kinds, according to nature and quality; one to be conducted directly by the State, the other to be carried out under local public bodies. The work of reconstruction to be accomplished by the State should, of course, form the backbone and foundation of the organic fabric of the Capital; so the Budget requisite therefor was framed on a correspondingly substantial scale. Below are given a general outline of the Budget in question:

(1) Expenditure for the work of reconstructing Capital . . . .	¥488,570,000
1. Tokyo . . . . .	402,793,000
2. Yokohama . . . . .	45,777,000
(2) Advances to accommodate Reconstruction Work executed by local public bodies . . . . .	15,325,402
(3) Subventions granted for construction of buildings in the “fire prevention zones” . . . . .	20,000,000
(4) Monetary aid granted for local Reconstruction Work . . .	69,225,917
(5) Monetary aid in payment of interest on local “reconstruc- tion work public loans” . . . . .	21,694,730
Total . . . . .	574,816,049
Expenditure for maintenance of the “Board of Capital Reconstruction” . . . . .	22,931,000

Now, these expenditures were to be defrayed in six annual instalments, commencing in 1923. Details concerning expenditures and outlays apportioned to each of the six years, are given below:

### I. RECONSTRUCTION EXPENDITURE FOR TOKYO

Fiscal year	Amount	For roads and streets	For canals and creeks	For public parks	For land readjustment
1923—4.....	¥ 7,981,000	¥ 5,932,000	¥ 377,000	¥ 282,000	¥ 1,390,000
1924—5.....	106,581,000	80,783,000	6,040,000	3,853,000	15,905,000
1925—6.....	105,187,000	80,845,000	5,940,000	3,752,000	14,650,000
1926—7.....	76,898,000	65,614,000	5,700,000	1,214,000	4,370,000
1927—8.....	64,773,800	53,498,800	5,710,000	1,380,000	4,185,000
1928—9.....	41,372,200	35,150,200	4,803,000	1,419,000	—
Total.....	402,793,000	321,823,000	28,570,000	11,900,000	40,500,000

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## II. RECONSTRUCTION EXPENDITURE FOR YOKOHAMA

Fiscal year	Amount	For roads and streets	For canals and creeks	For public parks	For land readjustment
1923—4.....	¥ 869,000	¥ 499,000	¥ 58,000	¥ 9,000	¥ 303,000
1924—5.....	13,151,000	9,317,000	966,000	162,000	2,706,000
1925—6.....	12,603,000	9,063,000	955,000	158,000	2,427,000
1926—7.....	7,223,000	5,292,000	1,232,000	165,000	534,000
1927—8.....	6,637,367	4,437,367	1,212,000	480,000	508,000
1928—9.....	5,293,633	3,119,633	1,189,000	985,000	—
Total.....	45,777,000	31,728,000	5,612,000	1,959,000	6,478,000

## III. ADVANCES TO ACCOMMODATE RECONSTRUCTION WORK EXECUTED BY LOCAL PUBLIC BODIES

Fiscal year	Amount	To Prefecture of Tokyo	To Prefecture of Kanagawa
1923—4 .....	¥ 1,283,356	¥ 1,050,023	¥ 233,333
1924—5 .....	3,915,517	3,073,146	842,371
1925—6 .....	3,427,771	2,927,771	500,000
1926—7 .....	4,198,758	3,698,758	500,000
1927—8 .....	1,500,000	1,000,000	500,000
1928—9 .....	1,000,000	1,000,000	—
Total .....	15,325,402	12,749,698	2,575,704

## IV. SUBVENTIONS GRANTED FOR CONSTRUCTION OF BUILDINGS IN "FIRE PREVENTION ZONES"

1923—4 .....	—
1924—5 .....	¥ 2,000,000
1925—6 .....	4,000,000
1926—7 .....	5,000,000
1927—8 .....	5,000,000
1928—9 .....	4,000,000
Total.....	¥ 20,000,000

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## V. MONETARY AID GRANTED FOR LOCAL RECONSTRUCTION WORK

Fiscal year	Amount	To Prefecture of Tokyo	To Prefecture of Kanagawa	To City of Tokyo	To City of Yokohama
1923—4.....	¥ 3,816,817	¥ 1,257,983	¥ 166,667	¥ 2,066,667	¥ 325,500
1924—5.....	15,446,105	1,597,735	575,704	10,901,666	2,371,000
1925—6.....	14,668,114	1,539,031	—	10,737,083	2,392,000
1926—7.....	14,556,923	2,188,757	—	10,180,833	2,187,333
1927—8.....	10,905,833	500,000	—	8,455,833	1,950,000
1928—9.....	9,832,125	500,000	—	7,814,625	1,517,500
Total.....	69,225,917	7,583,506	742,371	50,156,707	10,743,333

## VI. MONETARY AID IN PAYMENT OF INTEREST ON LOCAL “RECONSTRUCTION WORK PUBLIC LOANS”

Fiscal year	Amount	To City of Tokyo	To City of Yokohama	Grand Total
1923—4 .....	¥ 38,812	¥ 30,333	¥ 8,479	¥ 574,816,049
1924—5 .....	1,242,457	1,007,922	234,535	13,988,985
1925—6 .....	2,883,472	2,330,320	553,152	142,336,079
1926—7 .....	4,507,927	3,641,098	866,829	142,769,357
1927—8 .....	5,916,800	4,741,441	1,175,359	112,384,608
1928—9 .....	7,105,262	5,657,160	1,448,102	94,733,800
Grand Total.....	21,694,730	17,408,274	4,286,456	68,603,220

## RECONSTRUCTION EXPENDITURE FOR TOKYO

It need scarcely be said that, in reconstruction of the City of Tokyo, it was not lost sight of that mere restoration to the former state was not enough; but, on the contrary, sufficient provision had to be made for future development and prosperity. Accordingly, many and various were the undertakings to be effected in order to fulfil these requirements. But, as in everything else, it was necessary also to weigh and consider well the nature and degree of urgency of the projects, and to commence first those enterprises which demanded most urgent attention, relegating enterprises not so urgent in nature to later stages of the Reconstruction Work. Moreover, reconstruction activities were naturally and necessarily handicapped by the

restricted financial resources at the disposal of the authorities; so it was decided that the fire-ravaged districts should be the starting point of the work of reconstruction; for these localities were still in a wretched state of devastation loudly claiming the immediate attention of the Government.

Thus after mature consideration, a series of plans for restoration came to be framed. And the Reconstruction Scheme for Tokyo City was divided into four sections; namely, (1) Roads and Streets; (2) Canals and Creeks; (3) Public Parks; (4) Land Readjustment. In the following pages, we review in detail each of these four divisions of the Reconstruction Plan:

(1) Roads and Streets—In the construction or restoration of roads and streets, much care had to be taken for the proper arrangement of the main communication lines. And, in consequence, the standardized width of principal roads and streets was fixed at 21.82 metres to 54.55 metres, and these were to be reinforced by smaller auxiliary roads with a width of 10.91 metres or more. Again, the standardized width of the road lines, which were destined to constitute the network of city electric tramways, was decided to be 20 metres or more. And they were to be judiciously distributed in such a manner as to fulfil all the legitimate purposes of city traffic and communication, the actual condition of the locality concerned being taken into due consideration. Indeed, the entire mileage of the roads and streets to be, newly built or improved according to the policy set down in the Road and Street Reconstruction Plan, reached 248,412.73 metres.

On the other hand, the total average of land needed for the new construction or improvement of roads and streets amounted to 3,614,776.86 square metres, but there were large plots of land scattered here and there, totalling in all, 1,851,239.67 square metres, which might be appropriated, without indemnity, in consequence of the execution of land readjustment. Of these, however, 793,388.43 square metres were to be set aside for the construction of "land readjustment roads." So, there would remain land plots amounting to 1,057,851.24 square metres in the total area; and it was this, in fact, that the authorities intended to apply to the purpose of constructing the roads and streets referred to above. As a result, the total average of land to be used for road building and which had to be appropriated with proper compensation, amounted to 2,556,925.62 square metres in all.

(2) Canals and Creeks—It is primarily for the object of promoting and facilitating connexion of communications both by land and water in Tokyo, and, also, for increasing the general convenience of transportation, that the authorities formed plans for repairing or improving the old canals and opening new ones which should form ramification with the former. Following is an outline of the projected plan:

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Aggregate length:

- (a) of old canals to be repaired or improved . . . . . 14,672.73 metres
- (b) of canals to be newly cut . . . . . 527.27

(3) Public Parks—In ordinary times, public parks serve for beneficial effect to health and hygiene, as well as for purposes of recreation and amusement; while in time of emergency, they afford refuge for those who flee from conflagrations, or function as a shield against the fury of the fire; so much, indeed, that they are now quite an indispensable appendage to the complex organism of a modern city. Taught by the lessons of the Earthquake Fire, the authorities came to see it was most advisable that public parks should be uniformly situated in the city, as far as permitted by circumstances. Actuated by this fundamental policy in the laying out of parks, the Government decided to have the City of Tokyo build about fifty smaller parks at various spots deemed suitable for the purpose. Besides these parks to be laid out by the municipality, the Government intended, on its part, to build a certain number of parks on its own responsibility.

Particulars concerning parks projected by the Government:

Name	Area	Cost of land	Cost of making	Total
Sumida Park	. . . 297.52 sq. m.	¥10,100,000	¥1,800,000	¥11,900,000
Koto Park				
Nihonbashi Park				

(4) Land Readjustment—The entire area swept and decimated by the Earthquake Fire amounted to 34,669,322.30 square metres, of which 33,057,851.23 square metres were subjected to actual investigation as a preliminary measure for the land readjustment enterprise. As a result, 23,140,495.86 square metres were bracketed to undergo process of adjustment. As the first step, this huge area of land was divided up, for convenience' sake, into a number of sectors, each comprising from 99,173.55 square metres to 165,289.26 square metres; and the actual method of adjustment was dictated by the state of things prevailing in the sectors concerned. To facilitate and simplify the progress of the work, it was laid down as a general rule that those lands which, in consequence of the undertaking, became appropriable for the use of the State, for making roads or streets, squares, canals and creeks, and so on, should all be looked upon as State-owned and treated accordingly. Also, it was decided, solely in the interest of land-owners and other persons interested, that if the total area of residential land after the execution of land adjustment, should be found, reduced by more than 10 percent, as compared with the total area of the same land previous to the land adjustment process, proper compensation would be



# IMPERIAL DIET AND SCHEME FOR RECONSTRUCTION OF THE CAPITAL

made for land reduced in area exceeding ten percent, in accordance with the provisions of the Imperial Ordinance concerned. The primary object of the land readjustment was a thorough-going rectification of the complicated and confused boundary lines of the numberless land plots, then lying in black ruin in the City, thereby intending to increase the possible utilization of the lands and, in consequence, to contribute to satisfactory and successful conduct of the vast task of the City's reconstruction. Figures in rough outline of the plan of land readjustment are below:

(1) Area of lands laid waste by the fire . . . . .	34,669,322.30 sq. m.
(2) Area of lands surveyed . . . . .	33,057,851.23
(3) Area of lands subjected to readjustment . . .	23,140,495.86
(4) Area of a land readjustment sector . . . . .	99,173.55 to 165,289.26
(5) Number of sectors for land readjustment . .	120 to 180

Details concerning expenditure for land readjustment:

	Number of items	Cost per item	Total cost
(1) Expenditure for lands survey . . . .	10,000,000	¥ 0.3	¥ 3,000,000
(2) Compensation for removal of buildings . . . . .	1,000,000	27.5	27,500,000
(3) Expenditure for adjustment of underground structures and fixtures . . . . .	6,000,000	1.0	6,000,000
(4) Expenditure for construction of roads and sewerage systems . .	500,000	5.0	2,500,000
(5) Expenditure for removal of ob- structions . . . . .	5,000,000	0.3	1,500,000
Total . . . . .	—	¥ —	¥40,500,000

N.B. In some cases, the land used for making roads did not reach ten percent of the residential land concerned, while, in other cases, the land employed for constructing a trunk road could not be included in the land marked out for the purpose of readjustment, as the result of peculiar circumstances prevailing in the locality concerned. For these reasons, the total area of the land appropriable without indemnification was computed, on the safe side, to be 8 percent of the aggregate area of all the districts to undergo the readjustment process, or, more concretely, 1,851,239.67 square metres.

## THE RECONSTRUCTION OF TOKYO

### ADVANCES TO ACCOMMODATE RECONSTRUCTION WORK

#### EXECUTED BY LOCAL PUBLIC BODIES

The expenditure for reconstruction work to be conducted by the Prefectures of Tokyo and Kanagawa, dictated by the financial circumstances in these two prefectures, was to be advanced, in yearly instalments, out of the Government treasury on the following conditions; these loans were to be treated in the same way as those Governmental outlays which stand, according to the rules of national finance, outside the pale of the ordinary budget.

- (1) The advances granted to prefectures concerned should be within the limits of the following annual instalments:

Fiscal year	To Tokyo Prefecture	To Kanagawa Prefecture	Total
1923-4 . . . . .	¥1,050,023	¥233,333	¥1,283,356
1924-5 . . . . .	3,073,146	842,371	3,915,517
1925-6 . . . . .	2,927,771	500,000	3,427,771
1926-7 . . . . .	3,698,758	500,000	4,198,758
1927-8 . . . . .	1,000,000	500,000	1,500,000
1928-9 . . . . .	1,000,000	—	1,000,000
Grand Total . . . . .	¥12,749,698	¥2,575,704	¥15,325,402

- (2) Interest: 5 percent per annum. No interest during the period of non-redemption.
- (3) Period of non-redemption: To March 31, 18th year of Taisho (that is, the 4th year of Showa, or 1929)
- (4) The Period of redemption and the principal and interest to be redeemed in the same ratio, during 30 years, commencing April 1, the 18th year of Taisho (that is, the 4th year of Showa, or 1929)

#### THE SUBVENTION TO BE GRANTED FOR THE CONSTRUCTION OF BUILDINGS IN THE "FIRE PREVENTION ZONES"

To mark out what are called "fire prevention zones," in the shape of road lines, or in the form of collective grounds, in the civic centre of a city, and to require all the buildings and structures within these zones to be fire-proof and of non-inflammable materials: this is, in fact, not only the basic principle underlying the fire-prevention policy of a modern city, but it is also one of the most essential things for safeguarding order and security in a city or town. It is therefore, quite reasonable that some suitable subsidy should be granted for

## IMPERIAL DIET AND SCHEME FOR RECONSTRUCTION OF THE CAPITAL

the construction of such buildings and houses within the "fire prevention zones." For these reasons, a sum of 20,000,000 yen was inserted in the Budget for the purpose of granting subsidies under this head, and the details are given below:

### SUBSIDY FOR FIRE-PROOF CONSTRUCTION

Fiscal year 1924-5 . . . . .	¥2,000,000
"    1925-6 . . . . .	4,000,000
"    1926-7 . . . . .	5,000,000
"    1927-8 . . . . .	5,000,000
"    1928-9 . . . . .	4,000,000
Total . . . . .	¥20,000,000

The sum of subsidies granted to be culculated on the basis described below:

	Area of "fire prevention zones"	Area of sites for building	Area of floors of projected buildings	Subsidy sq. m.	Total subsidies
	<i>sq. m.</i>	<i>sq. m.</i>	<i>sq. m.</i>	<i>yen</i>	<i>yen</i>
In Tokyo .....	5,785,123.96	2,644,628.09	1,983,471.07	30	18,000,000
In Yokohama .....	727,272.72	360,330.57	270,247.93	30	2,452,500
Total.....	6,512,396.68	3,004,958.66	2,253,719.00		20,452,500

N.B.—1. The total floor area of projected buildings corresponds to just 60 percent of the area of the sites for buildings. The entire floor area, in sq. m., of the buildings, which should form the basis of the subsidies, was computed from the fact that half of the buildings to be constructed up to the fiscal year of 1928-9, were, on the average, two-and-half-storeys high. 2. Amount of subsidy. Supposing the cost of construction, per sq. m., of fire-proof buildings and of ordinary wooden buildings to be 300 yen and 200 yen respectively, the authorities decided to grant, as subvention, the sum of 30 yen per sq. m., nearly one-third of the difference between the sq. m., costs for these two kinds of construction.

### MONETARY AID GRANTED FOR LOCAL RECONSTRUCTION WORK

In view of the straitened financial condition of Tokyo and Kanagawa prefectures, and of the Cities of Tokyo and Yokohama, to which they had been reduced in consequence of the disastrous visitation, the Government saw the necessity of giving them, in some proper way, partial pecuniary help to support them in the conduct of their respective portions of the Reconstruction Work. And the rates of such monetary State aid were fixed as follows:

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Kinds of work		Rates of partial monetary aid (part of the entire cost)
1.	Roads and Ways	
(a)	"State ways" .....	1/2
(b)	Circular road lines	
	Radiating roads lines .....	1/3
(c)	Others .....	5/12
2.	Bridges	
(a)	Important ones to be construed on the "State ways" .....	2/3
(b)	Others .....	The same as "Roads and ways"
3.	Rivers ..	1/3
4.	Water supply work .....	1/4
5.	Sewerage system ....	1/2
6.	Public parks .....	1/3
7.	Garbage and refuse disposal arrangements .....	1/4
8.	Central wholesale market .....	1/4
9.	Educational arrangements (limited to those con- nected with elementary school education) .....	1/4
10.	Social work	
(a)	Employment Agencies .....	1/2
(b)	Others .....	1/4
11.	Sanitation	
(a)	Employment agencies .....	1/2
(b)	Hospitals for infectious disease .....	1/3
(c)	Others .....	1/4

This monetary aid was granted according to the details tabulated below:

Fiscal year		To Tokyo Prefecture	To Kanagawa Prefecture	To Tokyo City	To Yokohama City	Total
1923—4 .....		¥1,257,983	¥166,667	¥2,066,667	¥325,500	¥3,816,817
„ 1924—5 .....		1,597,735	575,704	10,901,666	2,371,000	15,446,105
„ 1925—6 .....		1,539,031	—	10,737,083	2,392,000	14,668,114
„ 1926—7 .....		2,188,757	—	10,180,833	2,187,333	14,556,923
„ 1927—8 .....		500,000	—	8,455,833	1,950,000	10,905,833
„ 1928—9 .....		500,000	—	7,814,625	1,517,500	9,832,125
Total .....		¥7,583,506	¥742,371	¥50,156,707	¥10,743,333	¥69,225,917

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## MONETARY AID IN PAYMENT OF INTEREST ON LOCAL

### "RECONSTRUCTION WORK PUBLIC LOANS"

As the cities of Tokyo and Yokohama formed a plan to obtain necessary funds for the execution of their construction undertakings by means of the flotation of loans, the Government thought fit to grant monetary aid out of State funds to enable those cities to meet payment of interest on the public loans to be raised. For this purpose, necessary steps were taken by the authorities. The monetary aid given in yearly instalments is detailed below:

Fiscal year	To Tokyo City	To Yokohama City	Total
1923-4 . . . . .	¥ 30,333	¥ 8,479	¥ 38,812
1924-5 . . . . .	1,007,922	234,535	1,242,457
1925-6 . . . . .	2,330,320	553,152	2,883,472
1926-7 . . . . .	3,641,098	866,829	4,507,927
1927-8 . . . . .	4,741,441	1,175,359	5,916,800
1928-9 . . . . .	5,657,160	1,448,102	7,105,262
Total . . . . .	¥17,408,274	¥4,286,456	¥21,694,730

Needless to say, the work of reconstructing the Capital could be achieved only by a judicious division of labour, both the central Government and the local public bodies equally undertaking their respective share of the task, as dictated by the character of the work; otherwise the grand object of Reconstruction could never have been attained. Therefore, as stated above, the Government extended a helping hand to the local public bodies in the form of monetary aid in payment of the public loans they had incurred, thus aiming to have their financial machinery operate easily and smoothly, or else offered proper subventions to facilitate construction of houses and buildings. On the other hand, the local autonomous bodies, too, were made to contribute their mite to realization of the grand reconstruction undertaking, by taking over suitable portions of the work to be carried out by the central authorities. Furthermore, to ensure equality in the share of the work, it was decided that those people who derived marked profits from the Reconstruction Work, should also bear part of the expenditure required.

## SUMMARY ACCOUNT OF DELIBERATIONS ON THE

### "RECONSTRUCTION BUDGET"

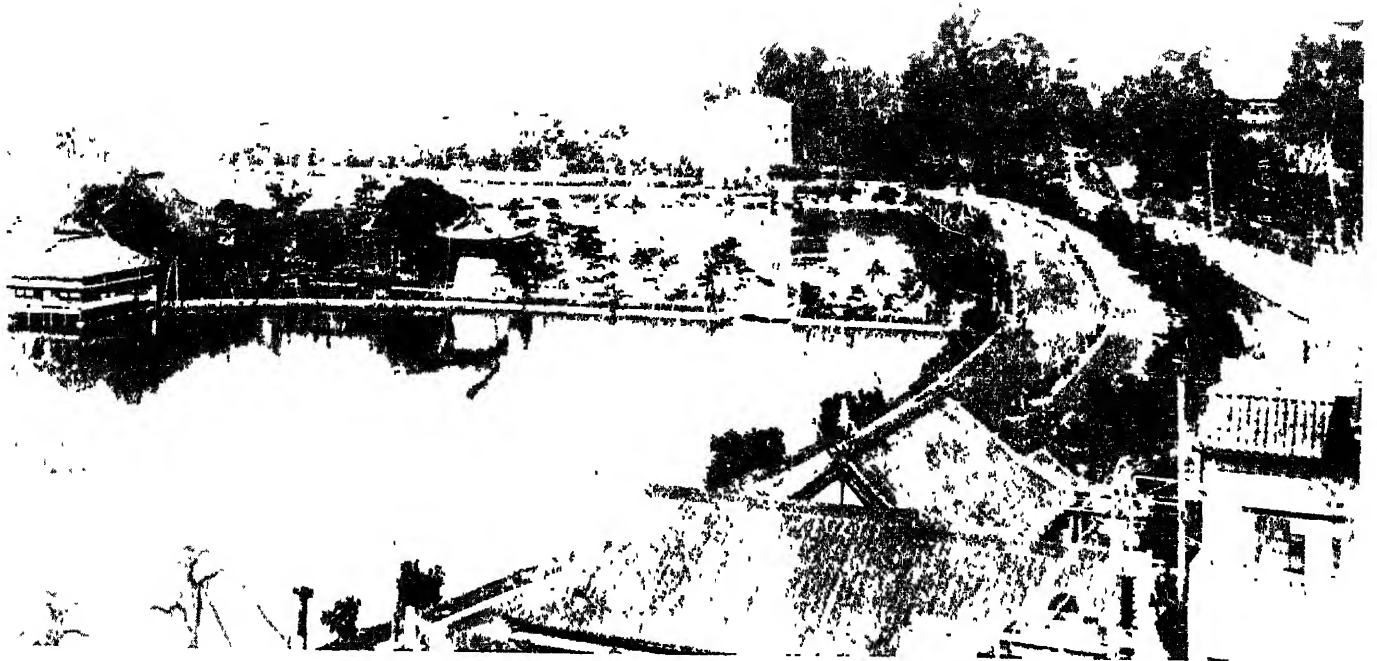
On December 19, 1923, the then Minister of Finance, Mr. Junnosuke Inoue, at the 47th extraordinary session of the Imperial Diet, explained the "Reconstruction Budget," the gist of his remarks being as follows:

The budget for reconstruction of the Capital, as embodied in Supplementary Budget No. 1 for the fiscal year of 1923-4, sets forth the Revenue and Expenditure as 14,691,395 yen. The figures represent the expenditure requisite for the work of reconstructing Tokyo City, which is to be effected by the State, the advances and subventions to be granted to the prefectures of Tokyo and Kanagawa as funds necessary for realization of the work allotted to them, the monetary aid given to the cities of Tokyo and Yokohama, to assist them in payment of interest on the public loans they had to raise for their portion of the reconstruction enterprise; and, finally, the necessary business expenses of the "Board of Capital Reconstruction." The grand total of the general Budget for restoration of the Capital foots up approximately to 597,000,000 yen; and this huge sum is the estimated total expenditure for the six years ending fiscal year of 1928-9. Public loans form the intended source to be resorted to by the Government for acquisition of the requisite funds.

Furthermore, in case Tokyo or Yokohama City should have recourse to money markets abroad for the raising of loans, the Government will hold itself prepared to guarantee payment of both principal and interest of such loans. Therefore, necessary measures have been duly taken in the "Reconstruction Budget" now under deliberation. The financial source for this is also public loans, the Finance Minister added.

As is evident on the face of it, the expenses required for satisfactory execution of the work of reconstruction and of other post-Earthquake undertakings, were necessarily too great to be conveniently derived from the ordinary budgetary resources so that it was unavoidable that public loans should be had recourse to for this object, until and unless some special plan for increment of the national revenue could be discovered or devised, though by what means nobody knew. Accordingly, as already said, the Government intended to depend wholly upon public loans, at least for some years, to tide over this financial difficulty. However, the payment of interest on the public loans, as well as the money converted into sinking funds, could be raised out of the fixed and definite financial sources clearly indicated in the regular general Budget. Such being the case, in the formulation of the Budget for the fiscal year of 1924-5, the Government's slogan was "financial retrenchment and postponement of Government enterprises," thus hoping to obtain whatever surplus could be gained from the budgetary balance for every year in the future. It may be added that the so-called "Reconstruction Loans" were to be raised in the money market at home, so long as any financial capacity was yet left among the people.

Such were the general lines of the Finance Minister's explanation at the



"Shinobazu-no-ike" pond and "Benten" shrine of Ueno Park



"Take-no-dai," a wide ground at Ueno Park, with a view of Tokyo Imperial Museum





Kiyosumi Garden, just after the disaster



Kiyosumi Garden, rebuilt by the Reconstruction Work



Imperial Diet. After repeated deliberations by the Budgetary Committee specially organized in the Lower House, the Budget was amended as follows at the plenary sitting on December 19:

(1) According to the original proposal, the work of land readjustment was to be executed wholly by the State. But this had to be amended so that the work of new land adjustment should be entrusted to the responsibility of the public body, and only such kind of adjustment work as was inevitable, as the result of the construction or repair of roads and streets, should be effected by the Government. By this amendment, therefore, the sum of 35,600,000 yen was struck off the expenditure for land readjustment, for which 46,978,000 yen was provided in the original Budget.

(2) By the amendment effected in expenditure for roads and streets, the repair of a road or a street with a width of 21.82 metres or more, came to be carried out by the Government, while those of a width not exceeding 21.82 metres should be done by the local public body. By this means, a retrenchment of nearly twenty percent was effected in the total estimate under this head, or more concretely, the sum of 253,551,000 yen.

(3) By means of the preceding two amendments, a sum of 106,377,200 yen was cut off from the general expenditure for the Reconstruction Work (that is, 448,570,000 yen). In consequence, a retrenchment of 2,558,200 yen was realized in the annual instalment of the reconstruction expenditure for the fiscal year of 1923-4.

(4) The opinion obtaining that there was no obvious need for a special organ for the execution of Reconstruction Work, but rather that it would be advisable to transfer the whole enterprise to the jurisdiction of the Home Department, the Budget for the "Board of Capital Reconstruction" was expunged *in toto*.

In connection with the foregoing amendments, the House of Representatives adopted the following resolution:

#### RESOLUTION

"The Government should carry out quickly the administrative adjustment and place the finances of the country on a firm basis, by developing reliable financial resources. It should also set an example of thrift and economy, and, further, make proper provision for financial rehabilitation of the country."

## THE RECONSTRUCTION OF TOKYO

On December 20, 1923, the aforementioned Budget was introduced to a plenary session of the House of Peers, when Finance Minister Inoue gave a similar explanation, and remarked further:

“I think it a matter of great regret that the House of Representatives made amendments in the Budget for Reconstruction of the Capital. The Government’s firm belief is that it is impossible to realize its object, unless the original plan and Budget are adhered to. But, on the other hand, the actual condition of things in the Earthquake distressed localities is vocal in demanding that definite plans of reconstruction be swiftly and promptly framed, and that people be given a guiding hand to lead them through this state of confusion and anxiety, that they may be made easy and secure in mind. Under the circumstances, the Government will strive to attain the final aim of the reconstruction undertaking, within the bounds prescribed by the amended Budget.”

Thus, on December 23, 1923, the Upper House passed the Budget as amended and sent up from the Lower House. At the same time, it passed the following resolution:

### Resolution concerning the Reconstruction of the Capital

“The Plan for Reconstruction of Capital should be framed with an eye of the remote future, while its actual execution should be properly and judiciously regulated by the condition of the national finances. The present Reconstruction Plan has undergone several modifications, and yet it seems to be still defective and imperfect. Therefore, the Government should exercise its discretion wisely, with the future always in mind and endeavour to achieve ultimate success in the task it has undertaken.”

After these enactments in the 47th extraordinary session of the Imperial Diet, the Budget for the Reconstruction of the Capital received definite shape at last, and its formal promulgation took place through the usual channel. Below are given the particulars of the Budget:

### The Amended Budget

(Small type indicates amendments, while the underlined part was scrapped)

# IMPERIAL DIET AND SCHEME FOR RECONSTRUCTION OF THE CAPITAL

A

## Extraordinary Revenue

From Public Loans . . . . .	¥ 11,430,785
	<u>14,691,395</u>
“Reconstruction Public Loans” and Government Loans . . . . .	11,430,785
	<u>14,691,395</u>

## Extraordinary Expenditure

### In the Jurisdiction of the Finance Department

Board of Capital Reconstruction . . . . .	¥ 702,410
Salaries . . . . .	<u>126,410</u>
Business Expenses . . . . .	<u>460,518</u>
Expenses for Research and Study . . . . .	<u>115,445</u>
Work of Reconstruction of the Capital . . . . .	6,291,800
	<u>8,850,000</u>
For Tokyo . . . . .	5,705,600
	<u>7,981,000</u>
For Yokohama . . . . .	586,200
	<u>869,000</u>
Advances to Accommodate Reconstruction Work . . . . .	1,283,356
Advances to Accommodate Local Reconstruction Work . . . . .	1,283,356
Subventions for Reconstruction Work . . . . .	3,816,817
Subventions for Local Reconstruction Work . . . . .	3,816,817
Monetary Aid in Payment of Interest on Public Loans for Reconstruction Work . . . . .	38,812
Monetary Aid in Payment of Interest on Public Loans for Local Reconstruction Work . . . . .	38,812
Total Expenditure under the Jurisdiction of the Finance Department . . . . .	11,430,785
	<u>14,691,395</u>

# THE RECONSTRUCTION OF TOKYO

B

In the Jurisdiction of the Finance Department

Reconstruction Expenditure of the Capital:

## Total Amounts

Reconstruction of the Capital . . . . .	342,192,800
	<u>448,570,000</u>
Reconstruction of Tokyo . . . . .	306,678,400
	<u>402,793,000</u>
Reconstruction of Yokohama . . . . .	35,514,400
	<u>45,777,000</u>

## Yearly Amounts

Fiscal Year 1923-4 . . . . .	¥ 6,291,800
	<u>8,850,000</u>
Reconstruction of Tokyo . . . . .	5,705,600
	<u>7,981,000</u>
Reconstruction of Yokohama . . . . .	586,200
	<u>869,000</u>
Fiscal Year 1924-5 . . . . .	87,607,000
	<u>119,732,000</u>
Reconstruction of Tokyo . . . . .	77,955,400
	<u>106,581,000</u>
Reconstruction of Yokohama . . . . .	9,651,000
	<u>13,151,000</u>
Fiscal Year 1925-6 . . . . .	86,855,400
	<u>117,790,000</u>
Reconstruction of Tokyo . . . . .	77,533,000
	<u>105,187,000</u>
Reconstruction of Yokohama . . . . .	9,322,400
	<u>12,603,000</u>

# IMPERIAL DIET AND SCHEME FOR RECONSTRUCTION OF THE CAPITAL

Fiscal Year 1926-7 . . . . .	66,190,800
	<u>84,121,000</u>
Reconstruction of Tokyo . . . . .	60,349,200
	<u>76,898,000</u>
Reconstruction of Yokohama . . . . .	5,841,600
	<u>7,223,000</u>
Fiscal Year 1927-8 . . . . .	56,235,934
	<u>71,411,167</u>
Reconstruction of Tokyo . . . . .	50,793,040
	<u>64,773,800</u>
Reconstruction of Yokohama . . . . .	5,442,894
	<u>6,637,367</u>
Fiscal Year 1928-9 . . . . .	39,011,866
	<u>46,665,833</u>
Reconstruction of Tokyo . . . . .	34,342,160
	<u>41,372,200</u>
Reconstruction of Yokohama . . . . .	4,669,706
	<u>5,293,633</u>

## B. SUPPLEMENTARY BUDGET SUBMITTED TO THE 49TH SESSION OF THE IMPERIAL DIET

In consequence of the amendments and retrenchment effected in the Reconstruction Work Budget, at the 47th session of the Diet, it became inevitable that the work of construction and repair of auxiliary roads and ways and the larger part of the land readjustment scheme should be conducted under auspices of the cities of Tokyo and Yokohama. But the municipal funds of these two cities had been seriously affected, as a matter of course, by the disastrous effects of the Earthquake and Fire, so that it was simply impossible for them to bear the necessary expenses of these undertakings. To furnish them, therefore, with the needful funds, the Municipal authorities turned to the Home Department for monetary reinforcements in the shape of "subventions out of the State treasury and advances." The Home Department authorities, after a careful investigation of the financial condition of the two cities, acceded to their wishes and announced that they would bear half of the expenditure required for the work connected with the making of roads and streets, while the re-

## THE RECONSTRUCTION OF TOKYO

maining portion was promised to be provided as advanced money. As regards expenditure for the land readjustment project, also two-thirds of the entire expense was to be borne by the Home Department, and the remaining part to be furnished likewise as advanced money. To realize this decision, the Government took steps for submitting it to formal deliberation of the Imperial Diet. On July 1, 1924, a Supplementary Budget, embodying the resolution of the Home Department, was introduced into the 49th session of the Diet, where after careful investigation, it was passed by the two Houses.

On July 22, saw the formal promulgation of the Supplementary Budget by an Imperial Ordinance.

Below are given details of the "Reconstruction Budget" as approved and passed at the 47th and the 49th sessions of the Imperial Diet:

I.	Expenditure for Work of Reconstruction .....	¥342,192,800
	Tokyo .....	306,678,400
	Yokohama .....	35,514,400
II.	Advances to Accommodate Local Reconstruction Work ..	61,470,402
	Tokyo Prefecture .....	12,749,698
	Kanagawa Prefecture .....	2,575,704
	Tokyo City .....	41,743,000
	Yokohama City .....	4,402,000
III.	Subventions for Construction of Buildings in the "Fire Prevention Zones" .....	20,000,000
IV.	Subventions for Local Reconstruction Work .....	128,080,917
	Tokyo Prefecture .....	7,583,506
	Kanagawa Prefecture .....	742,371
	Tokyo City .....	103,216,707
	Yokohama City .....	16,583,333
V.	Monetary Aid in Payment of Interest on Public Loans for Expenditure connected with Local Reconstruction ..	21,694,730
	Tokyo City .....	17,408,274
	Yokohama City .....	4,286,456
	Total .....	¥573,438,849
	(a) Total Budget as approved and passed at the 47th session of the Diet .....	¥468,438,849
	(b) Total Budget as approved and passed at the 49th session of the Diet .....	¥105,000,000



Hibiya Park

### C. SUPPLEMENTARY BUDGET AND AMENDMENT SUBSEQUENTLY ADDED

Subsequently, the Budget of Reconstruction suffered several amendments, during the period stretching from the 50th session to the 56th session of the Imperial Diet. At last, the grand total of the Budget reached 649,059,560 yen. However, owing to a series of inevitable occurrences, the Reconstruction Work, as at first conceived and planned, could not be completely achieved in the prescribed time, in consequence of which, therefore, the full execution of the Reconstruction Budget was also out of the question.

Dispensing with particulars, we now proceed to give the minutiae of the Reconstruction undertakings, by means of *an aperçu* with tabulated figures.

# THE RECONSTRUCTION OF TOKYO

Yearly			
Purpose	Gross Amount	1923—4	1924—5
Expenditure for the Reconstruction work of the Capital City .....	¥ 346,501,865	¥ 6,291,800	¥ 87,607,000
Reconstruction work Expenditure for Tokyo .....	306,987,465	5,705,600	77,955,400
Roads .....	257,458,400	4,446,600	63,790,400
Compensation for land acquired .....	171,445,166	3,645,600	52,825,400
Engineering work.....	37,052,358	—	3,893,000
Bridges .....	32,550,000	730,000	4,330,000
Common Conduits for underground installations	7,089,390	—	1,420,000
Sundry works .....	9,321,486	71,000	1,322,000
Canals .....	28,879,065	377,000	6,040,000
Compensation for land acquired .....	8,516,585	238,000	3,219,000
Engineering works .....	18,348,290	128,000	2,610,000
Adjustment of outer moats of Imp. Castle.....	309,065	—	—
Sundry works .....	1,705,125	11,000	211,000
Parks .....	11,900,000	282,000	3,853,000
Compensation for land acquired .....	10,100,000	282,000	3,817,000
Equipment and provisions .....	1,800,000	—	36,000
Readjustment of land .....	8,750,000	600,000	4,272,000
Readjustment expenses .....	3,000,000	185,000	1,430,000
Compensation given.....	5,000,000	390,000	2,462,000
Sundry works .....	750,000	25,000	380,000
Reconstruction of Yokohama.....	39,514,400	586,200	9,651,600
Roads .....	27,782,400	365,200	7,254,600
Compensation for land acquired .....	20,121,000	296,020	6,535,256
Engineering works .....	3,631,400	31,180	356,450
Bridges.....	3,135,000	28,000	185,600
Sundry works .....	895,000	10,000	177,294
Canals .....	5,612,000	58,000	966,000
Compensation for land acquired .....	913,800	25,000	345,000
Engineering works .....	4,606,200	32,000	608,200
Sundry works .....	92,000	1,000	12,800
Parks .....	1,959,000	9,000	162,000



# IMPERIAL DIET AND SCHEME FOR RECONSTRUCTION OF THE CAPITAL

Appropriations					
1925—6	1926—7	1927—8	1928—9	1929—30	1930—1
¥ 68,855,400	¥ 58,690,800	¥ 53,235,934	¥ 24,045,866	¥ 47,775,065	¥ —
61,463,000	53,519,200	46,243,040	14,726,160	47,375,065	—
50,581,000	47,193,200	40,514,040	11,367,160	39,566,000	—
40,494,000	32,152,200	23,132,040	695,926	18,500,000	—
3,688,000	6,653,000	4,962,000	856,358	17,000,000	—
3,961,000	5,315,000	9,139,000	7,575,000	1,500,000	—
1,202,000	1,420,000	547,000	50,390	2,450,000	—
1,236,000	1,653,000	2,734,000	2,189,486	116,000	—
4,861,000	4,680,000	3,849,000	1,303,000	7,769,065	—
2,486,000	902,000	428,000	383,585	860,000	—
2,196,000	3,445,000	2,876,000	593,290	6,500,000	—
—	—	—	—	309,065	—
179,000	333,000	545,000	326,125	100,000	—
2,968,000	1,183,000	1,603,000	2,011,000	—	—
2,938,000	1,070,000	1,064,000	929,000	—	—
30,000	113,000	539,000	1,082,000	—	—
3,053,000	463,000	277,000	45,000	40,000	—
970,000	189,000	226,000	—	—	—
1,793,000	249,000	41,000	35,000	30,000	—
290,000	25,000	10,000	10,000	10,000	—
7,392,400	5,171,600	6,992,894	9,319,706	400,000	—
5,668,400	3,778,600	4,840,894	5,474,706	400,000	—
3,461,132	2,746,101	2,598,609	4,483,882	—	—
1,056,035	583,065	1,223,152	31,518	350,000	—
968,800	301,761	848,162	802,677	—	—
182,433	147,673	170,971	156,629	50,000	—
797,000	1,002,000	1,547,000	1,242,000	—	—
298,000	96,000	79,000	70,800	—	—
488,200	889,200	1,440,200	1,148,400	—	—
10,800	16,800	27,800	22,800	—	—
140,000	139,000	512,000	997,000	—	—

# THE RECONSTRUCTION OF TOKYO

Purpose	Gross Amount	Yearly	
		1923—4	1924—5
Compensation for land acquired .....	¥ 345,000	¥ 9,000	¥ 130,000
Equipment and provisions .....	1,614,000	—	82,000
Readjustment of land .....	4,161,000	154,000	1,269,000
Readjustment expenses .....	890,000	50,000	360,000
Compensation given.....	2,937,500	67,500	730,000
Sundry works .....	333,500	36,500	179,000
Loans advanced for reconstruction works.....	72,669,928	2,306,356	12,488,517
Loans advanced for local reconstruction works ...	72,669,928	2,306,356	12,488,517
Loans to Tokyo Prefecture reconstruction work	12,749,698	1,050,023	3,073,146
Loans to Kanagawa Prefecture reconstruction work.....	2,575,704	233,333	842,371
Loans to City of Tokyo reconstruction work.....	51,942,526	928,000	7,727,000
Loans to City of Yokohama reconstruction work	5,402,000	95,000	846,000
Subsidy for reconstruction work .....	206,350,917	1923—4 5,153,817 1931—2 2,000,000	1924—5 29,152,105 1932—3 2,000,000
Subsidy to local reconstruction work .....	174,080,917	5,153,817	27,152,105
Subsidy to Tokyo Prefecture reconstruction work.....	7,583,506	1,257,983	1,597,735
Subsidy to Kanagawa Prefecture reconstruction work.....	742,371	166,667	575,704
Subsidy to city of Tokyo reconstruction work...	147,216,707	3,277,667	21,404,666
Subsidy to the city of Yokohama reconstruction works .....	18,538,333	451,500	3,574,000
Subsidy to building expenditure in the fire pre-ventions zones .....	32,270,000	1923—4 — 1931—2 2,000,000	1924—5 2,000,000 1932—3 2,000,000
Subsidy to Interest on Reconstruction Bonds .....	23,536,850	38,812	1,242,457
Subsidy to Interest on Local Reconstruction Bonds	23,536,850	38,812	1,242,457
Subsidy to Interest on City of Tokyo Reconstruc-tion Bonds .....	19,250,394	30,333	1,007,922
Subsidy to Interest on City of Yokohama Recon-struction Bonds.....	4,286,456	8,479	234,535
Grand Total .....	649,059,560	1923—4 13,790,785 1931—2 2,000,000	1924—5 130,490,079 1932—3 2,000,000

N. B.—In the 1926—7 instalment of the Reconstruction Work Loans there was a superfluous amount of Building Subsidy, ¥12,270,000 representing outlay unsettled till the year 1927—8, was distributed as supple-amounting to ¥7,135,526 are subtracted comes to ¥631,924,043.

# IMPERIAL DIET AND SCHEME FOR RECONSTRUCTION OF THE CAPITAL

Appropriations					
1925—6	1926—7	1927—8	1928—9	1929—30	1930—1
¥ 114,000	¥ 36,000	¥ 30,000	¥ 26,000	¥ —	¥ —
26,000	103,000	482,000	971,000	—	—
787,000	252,000	93,000	1,606,000	—	—
280,000	125,000	75,000	—	—	—
412,000	118,000	10,000	1,600,000	—	—
95,000	9,000	8,000	6,000	—	—
13,967,771	15,692,758	16,700,000	11,514,526	—	—
13,967,771	15,692,758	16,700,000	11,514,526	—	—
2,927,771	3,698,758	1,000,000	1,000,000	—	—
500,000	500,000	500,000	—	—	—
9,295,000	10,308,000	13,561,000	10,123,526	—	—
1,245,000	1,186,000	1,639,000	391,000	—	—
1925—6	1926—7	1927—8	1928—9	1929—30	1930—1
33,105,114	33,282,923	39,371,833	16,181,125	22,334,000	16,500,000
1933—4	1934—5	1935—6	1936—7	1937—8	1938—9
2,000,000	1,500,000	1,500,000	1,000,000	1,000,000	270,000
29,105,114	28,882,923	34,371,833	16,081,125	19,834,000	13,500,000
1,539,031	2,188,757	500,000	500,000	—	—
—	—	—	—	—	—
23,396,083	22,989,833	29,141,833	14,072,625	19,434,000	13,500,000
4,170,000	3,704,333	4,730,000	1,508,500	400,000	—
1925—6	1926—7	1927—8	1928—9	1929—30	1930—1
4,000,000	4,400,000	5,000,000	1,000,000	2,500,000	3,000,000
1933—4	1934—5	1935—6	1936—7	1937—8	1938—9
2,000,000	1,500,000	1,500,000	1,000,000	1,000,000	270,000
2,883,472	4,507,927	5,916,800	7,408,012	886,060	653,310
2,883,472	4,507,927	5,916,800	7,408,012	886,060	653,310
2,330,320	3,641,098	4,741,441	5,959,910	886,060	653,310
553,152	866,829	1,175,359	1,448,102	—	—
1925—6	1926—7	1927—8	1928—9	1929—30	1930—1
118,811,757	112,174,408	115,224,567	59,149,529	70,995,125	17,153,310
1933—4	1934—5	1935—6	1936—7	1937—8	1938—9
2,000,000	1,500,000	1,500,000	1,000,000	1,000,000	270,000

¥4,865,526 which was carried to the 1928—9 year instalment as supplement, and also out of the Fire Zone ment to the instalments for 1929—30 and later years. The net grand total from which the two sums

# CHAPTER III

## Final Approval of the Schemes and Plans for Reconstruction at the Imperial Diet

### SECTION I

#### GENERAL DESCRIPTION OF PLANS

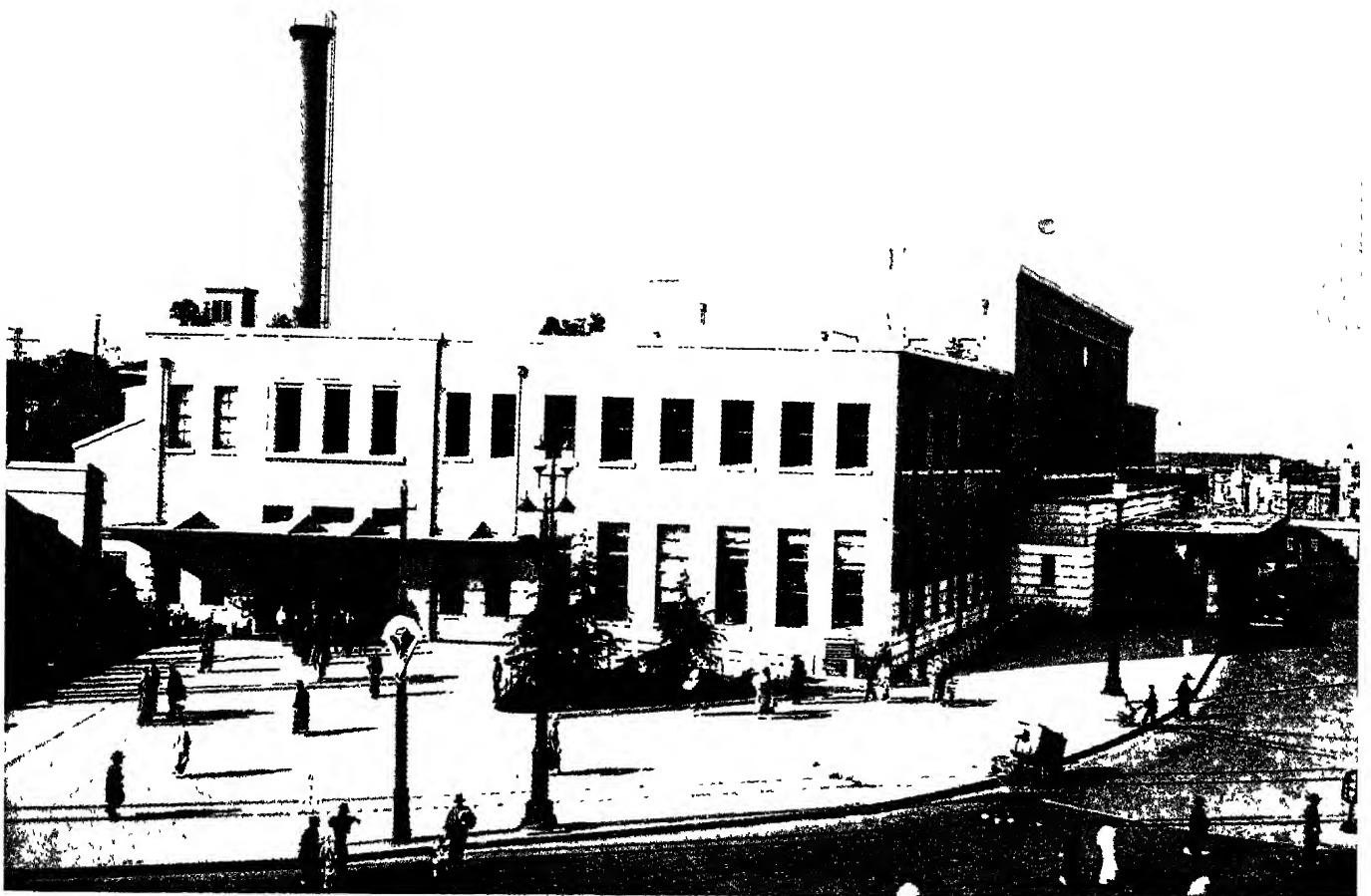
The projected scope of the work of reconstructing the Capital was so ambitious and comprehensive as to comprise the construction of roads and streets, the building of bridges, the opening or repair of canals and creeks, the laying out of public parks as well as the enterprise of land readjustment,—all these constituting the nucleus of the total Reconstruction Works; further, the provision of small public parks, the arrangements for markets, educational hygienic and social works, the water supply and sewerage systems, electric and gas enterprises, besides the adjustment of underground structures and fixtures, the delimitation of the residential, business, and industrial districts, the delimitation of the “fire prevention zones,” the subvention for construction of fire-proof buildings, as well as geological investigation. Some of these enterprises, for actual execution, came into the hands of the Home Minister, while another kind fell to the lot of the Governor of Tokyo Prefecture or of the Mayor of Tokyo City. As for the portion of the work to be undertaken by Tokyo Prefecture or the City of Tokyo, the Government declared itself prepared to grant a suitable subvention by way of helping financially in the execution of the allotted part of the reconstruction scheme. Below is given a detailed account of the Reconstruction Plan as projected and approved:

#### I. Plans and Projects under jurisdiction of the Home Minister:

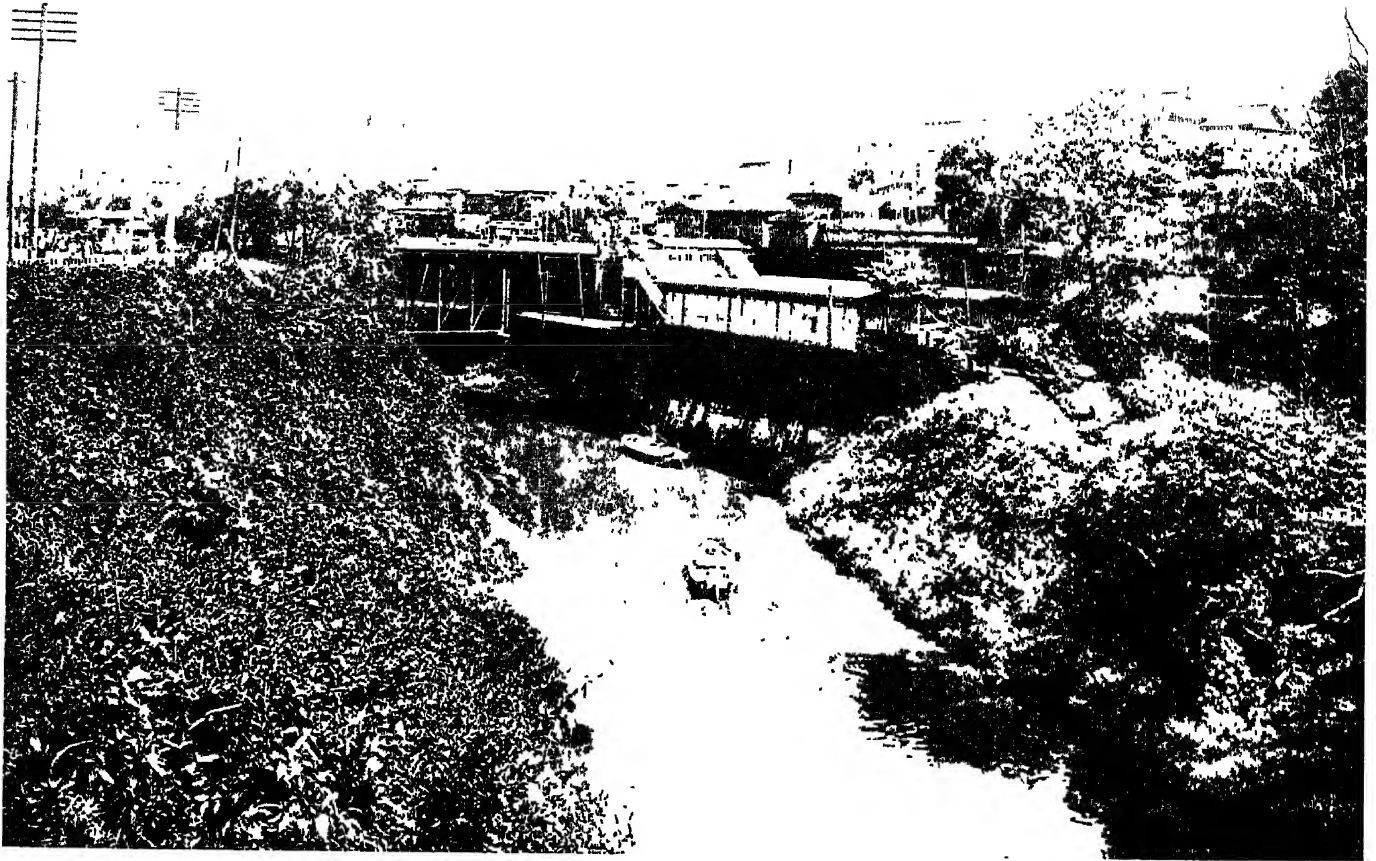
Land Readjustment . . . . .	15
Trunk Roads and Ways . . . . .	52
Bridges . . . . .	112
(a) Those on the trunk roads and ways . . . . .	96
(b) Those necessitated as the result of repair or improvement of canals . . . . .	15
(c) Those built in consequence of land readjustment . . . . .	1
Public Parks to be newly laid out . . . . .	3



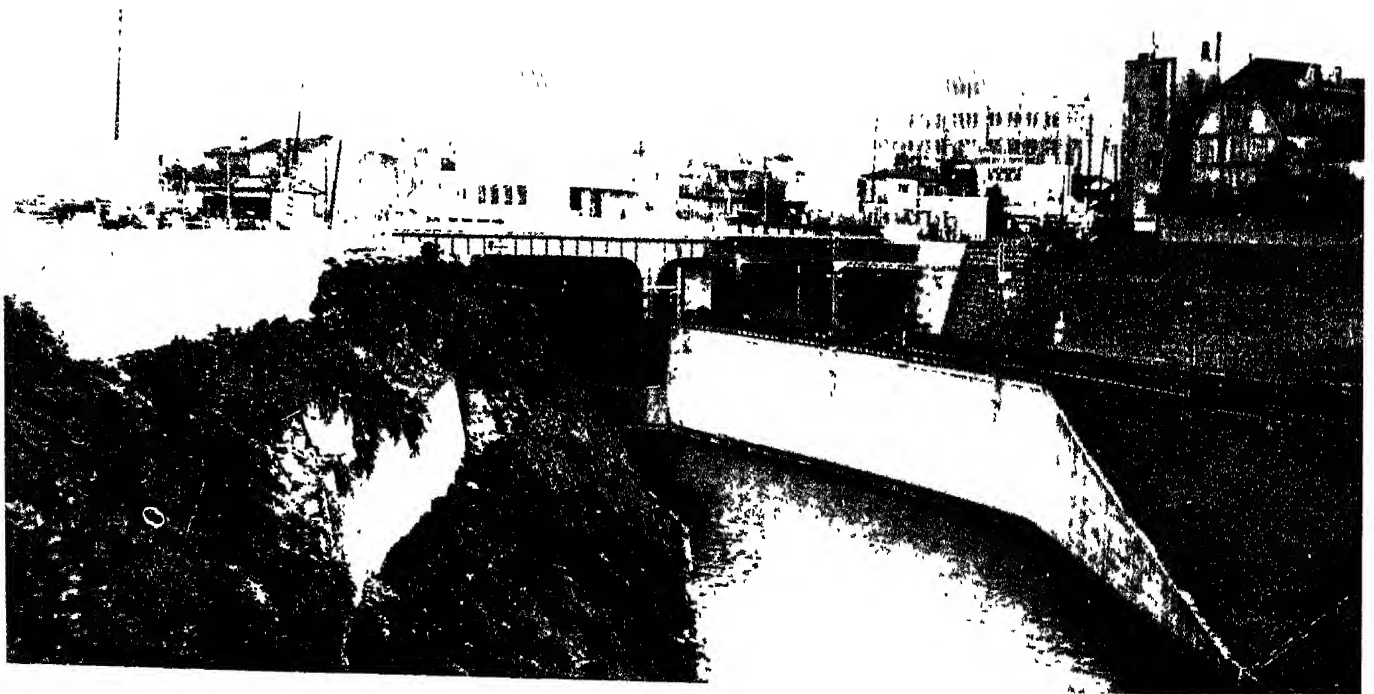
Ueno Station before the earthquake



Ueno Station after rebuilt



Old view of "Ochanomizu" Valley



"Ochanomizu" Valley as seen to-day

# FINAL APPROVAL OF THE SCHEMES AND PLANS FOR RECONSTRUCTION

Rivers and Canals . . . . .	13
(a) Those to be repaired . . . . .	11
(b) Those to be newly cut . . . . .	1
(c) Those to be reclaimed . . . . .	1
II. Plans and Schemes undertaken by the Governor of Tokyo Prefecture:	
“State Highways” . . . . .	7
(a) Roads . . . . .	4
(b) Bridges . . . . .	3
“Prefectural Highways” . . . . .	10
Educational Arrangements . . . . .	5
(a) Middle School (for boys) . . . . .	1
(b) Girls’ High School . . . . .	1
(c) Craftsmen’s School . . . . .	1
(d) Practical Industrial School . . . . .	1
(e) Chemical Industrial School . . . . .	1
III. Schemes and Projects realized by the Mayor of Tokyo:	
Land Readjustment . . . . .	50
Auxiliary Road Lines . . . . .	122
Bridges . . . . .	438
(a) Accompanying auxiliary road lines . . . . .	129
(b) As the result of land readjustment . . . . .	57
(c) Rebuilt or repaired . . . . .	252
Water Supply Works . . . . .	
Sewerage Systems . . . . .	
Small Public Parks . . . . .	52
Arrangements for disposal of refuse and garbage . . . . .	
Central Wholesale Market . . . . .	
Arrangements for public sanitation . . . . .	
Educational arrangements . . . . .	116
(Construction of elementary schools) . . . . .	
Social Works . . . . .	63
(a) Employment Agencies . . . . .	13
(b) Crèches and Advisory Offices for Children’s Health . . . . .	14
(c) Women’s Workhouses . . . . .	6
(d) Training Office . . . . .	1

## THE RECONSTRUCTION OF TOKYO

(e) Public Dining Halls . . . . .	10
(f) "Cheap Lodging-Houses" . . . . .	10
(g) City Pawn-Shops . . . . .	7
(h) Public Bath-Houses . . . . .	2
Electric Enterprises . . . . .	2,517
(1) Metal Tracks:	
(a) 85 railed tracks	
(b) 1,640 electric routes	
(c) 23 transforming stations	
(d) 740 cars	
(e) 29 structures	
(2) Electric Power-Supplying Enterprises:	
(a) 9 structures	
(b) Electric routes (9,300 feet)	
(c) 2 Transforming stations	
(d) Electric light (339,320 lamps)	
(e) Electric power (21,871 horse-power)	

### IV. Various Plans Pertaining to Reconstruction Enterprise:

#### ADJUSTMENT OF UNDERGROUND STRUCTURES AND FIXTURES

The work of adjusting underground structures and fixtures, and other kinds of structures, a necessary accompaniment to the Reconstruction Enterprise, was so comprehensive in scope as to embrace the water supply and sewerage systems, the gas supply, the spanning of electric wires of various purposes, as well as the laying of electric tramways. Some of these works were necessitated by the execution of the land readjustment project and the consequent removal of houses and buildings, while others were in consequence of the construction of roads and ways and the cutting of canals. So, the estimated expenditure for this work of adjustment alone was put at nearly 16,170,000 yen. Of these works, those connected with the installation of electric lamps within houses and buildings, the telephone connections, the laying of water and gas supply, were to be entrusted, for execution, to the hands of the respective persons who made that sort of work their speciality. As to the work on roads and streets also, the same measure was adopted; and the expenses entailed on



## FINAL APPROVAL OF THE SCHEMES AND PLANS FOR RECONSTRUCTION

that account were defrayed directly by the proper authorities concerned. Special care was taken to ensure efficient and satisfactory execution of the undertaking, by constantly maintaining intimate relations between the parties concerned.

### DEMARCATIION OF RESIDENTIAL, BUSINESS AND INDUSTRIAL DISTRICTS

In April, 1929, there was formally announced, through the proper channel, a scheme for defining and demarcating the residential, business, industrial and other (kind not yet decided) districts, on the decision and approbation of the Committee for Special City Planning. The primary object of this measure was to group and congregate together, within the same districts, as far as practicable, according to the particular circumstances obtaining in each locality, those buildings which had identical aim and object, thus hoping to facilitate realization of the aspirations proper to each locality.

### "FIRE PREVENTION ZONES" AND SUBVENTION FOR CONSTRUCTION OF BUILDINGS

Fires form undoubtedly the greatest menace to the security of towns and cities. The Government, therefore, being naturally solicitous to lessen the dangers from this source, had already taken steps, even before the Earthquake, for selecting proper districts, which it deemed very important and suitable for the purpose of preventing fires, and indicating them as "zones for prevention of fires," after the deliberation and approval of the City Planning Committee. The consequences of the Earthquake Disaster, however, showed the necessity of introducing some modifications in the plan. In April, 1925, this was made known to the general public by means of a Home Department Notification. According to this official notification the "Fire Prevention Zones" were divided into two kinds: "Fire Prevention Zones" of class "A"; and "Fire Prevention Zones" of class "B". In the "A" class "zones," the buildings and houses, together with their exterior fixtures, are required to be non-inflammable in materials and fire-proof in construction, while, in class "B" zone, only the outer walls or sides are to be made fire-proof or sub-fire-proof. And for the construction of buildings in these "zones," the Government had the intention of granting suitable subsidies on proper conditions, an indispensable step for hastening the full achievement of the original object in establishing these "zones." For this purpose, therefore, as already mentioned in the foregoing pages, the Imperial Diet, at its 47th session, gave formal approval for the

outlay of 20,000,000 yen. On August 2, 1924, was promulgated the "Regulations concerning the subvention for construction of buildings in the 'fire prevention zones'."

## GEOLOGICAL INVESTIGATIONS

A systematic geological investigation both in Tokyo and Yokohama was regarded as of prime importance and highly essential in garnering data and materials of various descriptions for enabling officials to cope with disasters of like nature in the future, as well as for facilitating satisfactory execution of different kinds of architectural and engineering schemes. Therefore, the Government framed a project for carrying out, in the course of six years, a series of boring experiments, at 859 different spots in Tokyo and Yokohama.

## SECTION II

### GUIDING PRINCIPLES IN THE PLANNING

In proceeding with the Reconstruction Work, the Government laid down fundamental policies in the formulation of schemes and projects, which should serve as a standard to guide the enterprise. The City of Tokyo, too, decided to follow the Government's policies and, by keeping pace, to endeavour to achieve the common aim in harmonious co-operation. We describe below the Governmental policies observed in shaping schemes for the reconstruction undertaking.

#### I. Principles in the execution of land readjustment

##### A. Basic Investigation

- (1) To carry out actual survey of land in the fire-swept districts, and to compile a land register and a directory of land-owners.
- (2) To investigate the actual condition of underground structures and fixtures, such as water mains and sewerage systems, the telegraph and telephone underground cable systems, the electric power transmitting and gas main systems, etc.
- (3) To investigate the sites whereon were still standing the remains of the Earthquake-demolished buildings, etc.
- (4) To investigate the lands prescribed under No. 1-No. 7 of Article 43 of the Arable Land Cadastration Law.

## B. Plans for Land Readjustment

### (1) Arrangement of delimited sections of land:

- (a) In making the arrangement of delimited plots of land, due regard must be had to the existing system of underground structures and fixtures, as well as the sewerage systems; and, if there be no special inconvenience, the old roads and ways should be left in tact, so that they may serve as the model and standard in building new roads and ways.
- (b) The arrangement must be undertaken in such a way that the greater axis of the delimited land sections should run parallel to the principal road or street.

### (2) The shape of the delimited land sections:

To make the length of the greater axis of a delimited land section two to four times as great as the length of the shorter axis.

### (3) The depth of a land plot and the minimum width of roads to be newly built:

To be decided by taking into due consideration the general condition of the district section, the land section as well as the land plot. But the general standard is laid down in the tables given below.

(Vide: the chart of delimited land sections, and the appended table, both annexed below)

### (4) Indication of the "Construction Line":

In case indication of the "Construction Line" be found necessary, in consequence of the special condition of the locality concerned, a road with a width of at least 4 metres should be built. On the other hand, where the real condition of the locality is uncertain, it is required that the indication of the "Construction Line" will be followed, even if the depth of the delimited land sections should be a little too great.

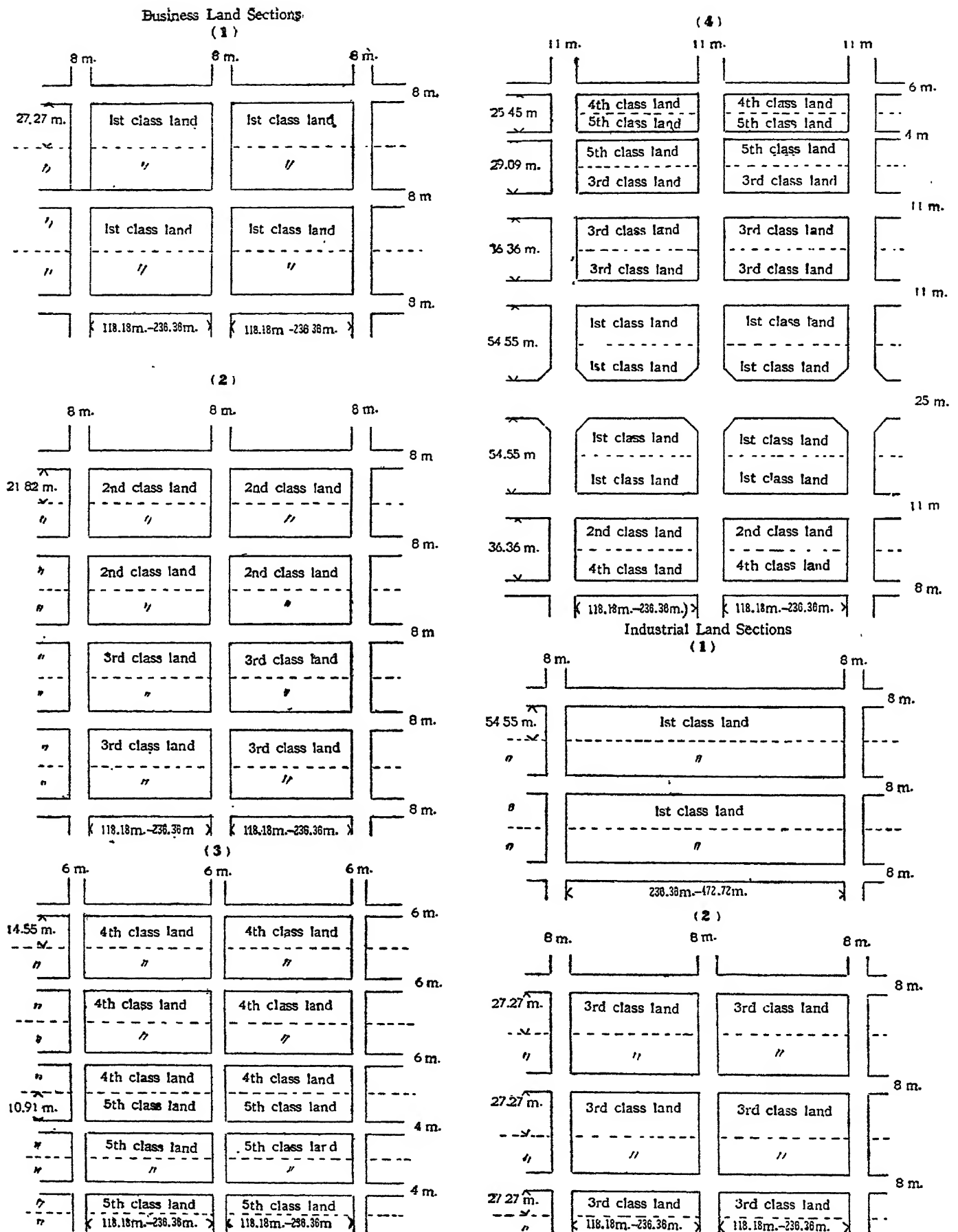
## Appended Table:

Sections	Residential land sections		Business land sections		Industrial land sections		Warehousing land sections	
	Depth of land plots	Minimum width of roads	Depth of land plots	Minimum width of roads	Depth of land plots	Minimum width of roads	Depth of land plots	Minimum width of roads
1st class.....	36.36 m.	8 m.	27.27 m.	8 m.	54.54 m.	8 m.	54.54 m.	8 m.
2nd class.....	27.27 "	8 "	21.82 "	8 "	27.27 "	8 "	—	—
3rd class.....	18.18 "	8 "	18.18 "	8 "	—	—	—	—
4th class.....	14.55 "	6 "	14.55 "	6 "	—	—	—	—
5th class.....	10.91 "	4 "	10.91 "	6 "	—	—	—	—

- N. B. 1. In those land sections not indicated, the actual condition of the locality and the details contained in the preceding table should be both taken into due consideration.
2. In a special section within the "Business Land Sections", the minimum width of roads as prescribed in the above table, may be decreased to 4 metres.

# THE RECONSTRUCTION OF TOKYO

## CHART OF DELIMITED LAND SECTIONS

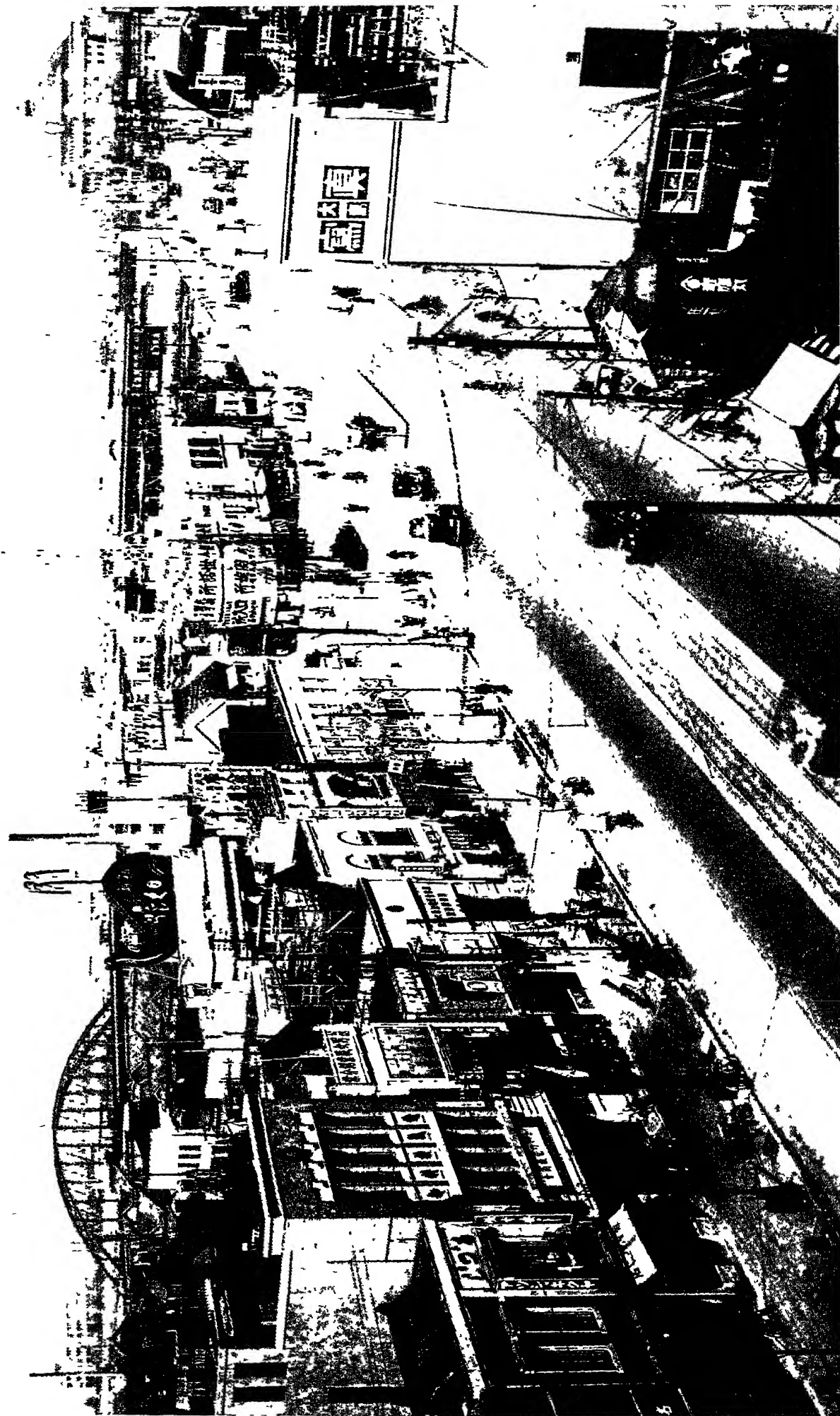




The cross way square of Iwamoto-cho, Kanda ward



The cross way square of Asakusa, Asakusa ward



Taisho Road with a view of "Kokugi-kan," Asakusa ward

II. Principles in the planning of roads and streets, and in the construction of bridges

A. Principles to be followed in planning the construction of roads and highways

1. To use the metric system in defining the width of roads and ways.
2. To continue the present plans in further execution of the land readjustment work now going on, except in cases where some modification is specially needed.
3. At those places where there are great possibilities of the extension of underground railway facilities, width of the roads and ways should be made 27 metres or more.
4. Roads and ways where the construction of electric tramway lines are contemplated should be 22 metres or more in width.
5. To adopt, as far as possible, those road lines which were already determined and approved in the old scheme of town planning.
6. To adopt also, as far as convenient, the old authorized lines of the electric tramway system; this is particularly so with regard to projected lines where the purchase of the necessary land has been already completed.
7. When transferring or extending underground structures and fixtures, the principle to observe is to execute the work in the direction of the sides of the road or way.
8. In widening existing roads or ways, the principle to observe is the same as mentioned in 7 above.
9. In constructing a road, proper care should be taken to avoid, as far as practicable, permanent buildings which have survived the earthquake with comparatively slight damage.
10. In widening or newly constructing auxiliary roads with a width of 22 metres or less, little regard need be taken of slight irregularities or curves. As far as permissible, the existing roads and ways should be utilized for the purpose; and at the same time, the arrangement of those roads should be such as to constitute together at least a certain semblance of system in respect to the main trunk roads.
11. The curving point of a road should be situated, as far as possible, at the cross with another road.
12. In order to ensure effective utilization of residential land plots lying



between a river or canal and the road or street running along them, care should be taken that such land ploats have a proper width, according to the size and situation of such river or canal.

13. With respect to a road or way with a width of 22 metres or more, the gradient should never be more than  $1/25$ .
14. The crossing points of more than two roads is to be averted as far as possible. If absolutley unavoidable, care must be taken lest a number of roads should cross and intersect one another at the same point. If possible, sufficient space should be left open for making an "island" (an isolated spot on a road and proof against wheeled traffic), that a better and easy regulation of traffic may be assured.
15. In constructing a bridge, care must be taken to secure a proper situation for it lest the projected bridge, when completed, should form a sharp angle with the road running towards it.
16. In constructing or widening a road which runs contiguous to a large sewerage system, the same sewerage system should be covered and concealed, or be suitably reconstructed, so that the space thus created may be utilized, as much as possible, as part of the road to be built or widened.
17. The depth of the residential land plots lying along a main trunk road should be made greater than that of a similar land plot situated near an auxiliary road.
18. The width of the residential land plots running parallel to a main trunk road should be made two to four times as large as the width in a rectangular direction, by exercising judicious care beforehand, when defining the sections and divisions of the roads concerned.
19. At the corner of roads and streets, proper space should be created and left open.
20. At the head of a bridge, an open square of proper size should be provided.

B. The width of drives and sidewalks

1. In the case of a road with a width of 11 metres or more, the following standards should be observed. In respect of a road with a width of 44 metres or more, a special rule is to be given as regards each individual road or street. It may be added that by the "width of a drive" is meant the distance between the tops of the two stone kerbs indicating the boundary between the sidewalk and the drive, planted on each side of the road or street.



# FINAL APPROVAL OF THE SCHEMES AND PLANS FOR RECONSTRUCTION

Width of a road or street	Width of a drive	Width of sidewalk on each side of a road or street
36 metres	24.0 metres	60.0 metres
33	22.0	5.5
27	18.0	4.5
25	16.6	4.2
22	14.6	3.7
20	13.0	3.5
18	11.0	3.5
16	10.0	3.0
15	9.0	3.0
11	6.0	3.0

2. In the case of those roads with a width of 22 metres where tracks are built for an electric tramway line, the width of the drive is to be specifically 16.6 metres, and that of the sidewalks 2.7 metres each.
3. Where observance of the foregoing standards is not convenient or possible, by reason of particular local circumstances or otherwise, the same standards need not be compulsory.

## C. Gradient of the cross and longitudinal sections

### 1. Gradient of the cross section:

- (a) The gradient of the cross section of a drive is to be regulated by the following standards:

Kinds of roads	The vertical gradient		
	1. less than $\frac{1}{50}$	2. more than $\frac{1}{50}$ less than $\frac{1}{50}$	3. more than $\frac{1}{25}$
Seat-asphalt roads. . . . .	1/40	1/60	1/80
Wooden-block-paved roads . . . . .			
Cement-concrete roads . . . . .			
Brick-paved roads. . . . .			
Stone-paved roads . . . . .	1/35	1/50	1/70
Pitch-concrete roads . . . . .			
Pitch-macadamized roads . . . . .			
Gravelled roads . . . . .			
Crushed-stone-paved roads. . . . .	1/25	1/35	1/50

- (b) For the curve line of the surface of the transverse section of a paved drive, the hyperbolic line should be employed. In the case of a road where run the tracks of an electric tramway line, the upper edge of the outside rails should be considered as the apex of the curve line of the surface of the horizontal section.

## THE RECONSTRUCTION OF TOKYO

- (c) Except for special spots, the sidewalks must have a horizontal sectional gradient of  $1/30$  to  $1/60$ , towards the drive.

### 2. The curve of the longitudinal section:

- (a) In places where the variation of the gradient of the longitudinal section (the algebraic difference) of a road, is more than  $1/100$ , the following table furnishes necessary standards for the regulation of the vertical sectional curve:

Variation of the gradient	Length of the curve
$1/100$ - $2/100$	10 metres
$2/100$ - $3/100$	20
$3/100$ - $4/100$	30
$4/100$ - $5/100$	40
$5/100$ - $6/100$	50
$6/100$ (and more)	60

- (b) The curve of the longitudinal section is to be represented by a parabolic line. The heights should be calculated at suitable intervals, below 10 metres, and these points are to be connected by means of a straight line.

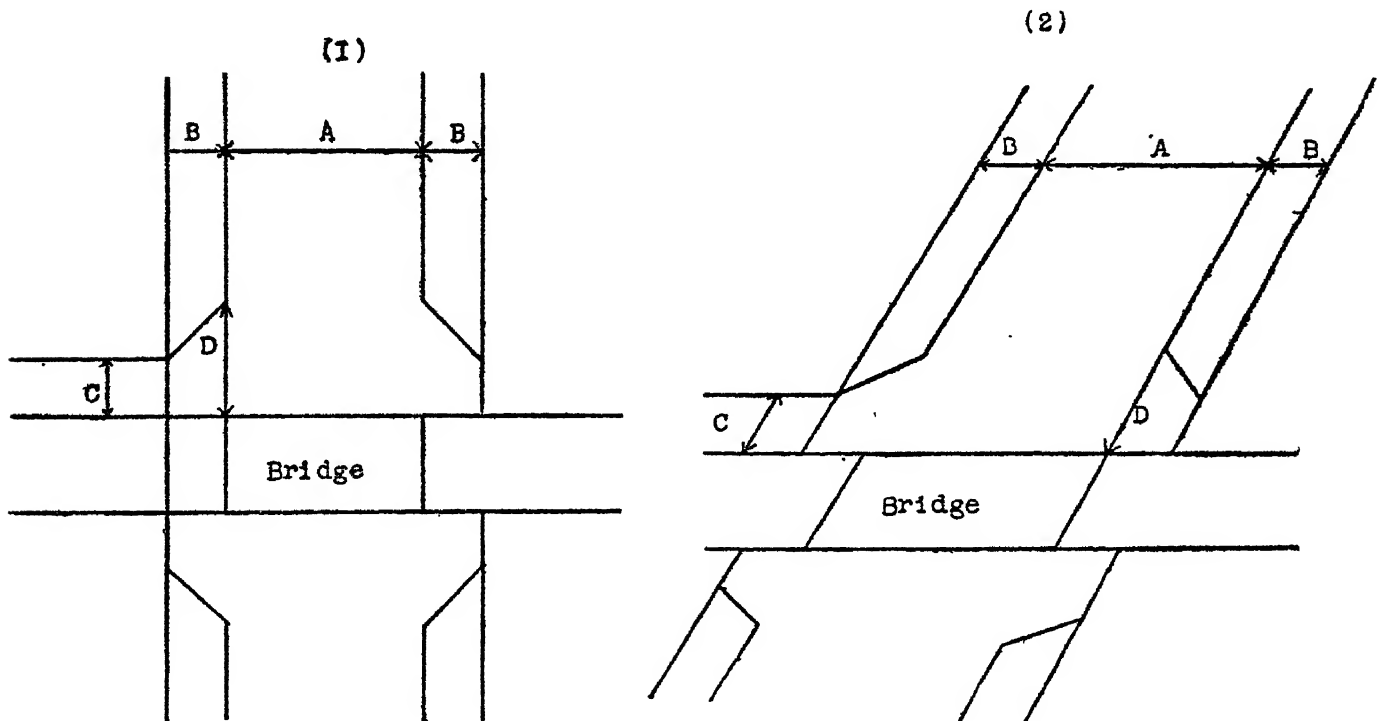
### D. Side ditches and gutters in front of the land plots, and those at the boundary lines

1. The side ditches and gutters in front of land plots should be dug in such a way that the lines of their inner sides exactly correspond with the boundary line of the grounds concerned.
2. The standard height of the stone kerb marking the boundary of the drive and the sidewalk is to be 11 centimetres. In any case, it should not be less than 9 centimetres nor more than 20 centimetres.
3. The standard gradient of the longitudinal section of the ditches and gutters situated at the boundary lines of the "L" shape, is to be  $1/300$ .

### E. The rounding or cutting-off and the width of the road at the heads of a bridge

1. The rounding or cutting-off of the corner of a road:
  - (a) When a road with a width of 6 metres or less crosses another road less than 11 metres wide, no rounding or cutting off is to be effected at the corners of the roads concerned, except for those where such cutting-off is necessary.

- (b) In case a road with a width of 8 metres or more crosses another road less than 11 metres wide, a cutting-off of 3 metres in width has to be effected at the corners of such cross-roads. This, however, is not absolutely necessary, according to the circumstances of the place concerned.
  - (c) When a road with a width of less than 11 metres crosses another road 11 metres or more wide, no cutting-off is to be made at the point of such crossing.
  - (d) A cutting-off of a width of a 4 metres has to be made at the point where a road with a width of 11 metres or more, but not reaching 22 metres, crosses another road 11 metres or more wide.
  - (e) A cutting-off of a width of 12 metres has to be provided at the point where two roads of the identical width of 22 metres or more cross each other. But at a spot where the tracks of the electric tramway line have no curving line, the width of the cutting-off may be 8 metre.
  - (f) In cases, however, where the crossing of two roads forms a particularly sharp angle, the rules laid down under the preceding heads need not be strictly observed, but a special arrangement is allowable to cope with exceptional cases.
2. The cutting-off of the road at the heads of a bridge:
- (a) The width of the road at the heads of a bridge should be increased, according to the directions as described below.



In the above diagram, "B" represents the width of the road specially provided, which should be  $\frac{1}{2}$  of "A" (in a bridge spanning a river slantwise, as in diagram (2) this "A" is shown by "A"), but its minimum width is to be eight metres and the maximum eighteen. "C" also indicates the width of the road, and the rest is the same as mentioned above. Only, the minimum and maximum widths are, in this case, to be six and eleven metres respectively. "D" should be designed so as to be twice as large as "C," and the minimum widths must be twelve and twenty-two metres respectively.

- (b) In cases, however, where the angle is formed particularly acute, the foregoing rules may be ignored, and a special arrangement is allowed to deal with the special case.

F. The "safety zones" near electric tramway lines

1. Except in a special case, "safety zones" are to be provided at the more important halting places other than the crossing points of electric tramway tracks.
2. Except in special cases, the provision of "safety zones" is to be regulated by the following standards:

Width of road	Width of "safety zones"
44 metres	1.8 metres
36	1.8
33	1.8
27	1.2
25	1.2
22	1.2

3. Except in special cases, the length of the "safety zones" is to be regulated by the following standards:
  - (a) At especially important halting places: 47 metres.
  - (b) At other halting places: 32 metres.
4. The height of "safety zones" is prescribed ordinarily to be 1 decimetre from the surface of the paved road.
5. The distance between the "safety zones" and the outer rail of tramway tracks is to be 6 decimetres, in the part of the straight line.
6. The "safety zones" are to be of two kinds: those of permanent construction and those of a provisional nature.

7. At branching points of electric tramway lines, the "safety zone" is to be constructed some way this side of the beginning of such branching tracks.
8. In all cases other than that mentioned in 7, the "safety zone" is to be some way this side of the line of sight.

G. The paving of roads and streets

1. Wooden-block-paved roads—A road or way to be paved in this manner is to be first dug up; then the road-bed is to be pressed down and hardened, by means of the paving machine or roller, so as to make it firm and stable, to receive, as foundation work, a layer of concrete, about 2 decimetres in thickness, on the average. Then, on the concrete foundation work, wooden cubes, 1 to 1.1 decimetres thick, 1 broad and 1.5 decimetres high, are to be laid properly, in the form of lines or belts, with width of joint of 3.64 to 4.55 millimetres, the interestices thus created to be subsequently filled up with asphalt and dry sand.
2. Stone-paved roads—After a preliminary operation similar to that described in 1 above, the road-bed is to be made solid with a concrete layer, 2.1 decimetres in thickness, which layer is to be again covered and coated with a cushion mortar bed-stratum, a compound of one part cement and three parts sand; then stone blocks, 1.2 decimetres thick, 1.1 broad, and 1.5 to 3 decimetres in length, are to be properly laid on this bed-stratum. Also a width of joint, 1 millimetre broad, is to be provided, with asphalt or cushion mortar.
3. Pitch-concrete roads—The preparatory operation is the same as that mentioned in 1 or 2 above. This concrete foundation is to be, in this case, 2 centimetres in thickness, and it is to be firmly sheeted with a layer of pitch and concrete, to a thickness of about 6.1 centimetres.
4. Pitch-macadamized roads—After a proper preparation, crushed pieces of hard stone of a suitable size, are to be spread on the prepared road-bed, to a depth of about 1.2 decimetres, the inevitable interestices to be filled up by a layer of smaller crushed fragments of stone, to a thickness of 1.5 centimetres; then, the whole work is to be well pressed down, so as to reduce it to a thickness of about 9 centimetres. For a second time, a further layer of crushed hard stone, of a fitting size, is to be spread on it, to a depth of 9 centimetres and then the whole thing is to be thoroughly rolled by the paving machine, until it is made hard and firm. Then, again, tar is to be spread over it uniformly; and then, a second time, another layer of a thickness of about 1.2 centimetres,

of crushed stone of proper size, is to be laid, which is again to be covered with tar. The whole thing is then to receive a finishing layer of crushed stone of suitable size, which, then, is to be hardened and smoothed by the rolling machine, till the whole thickness is pressed and reduced to some 18 centimetres.

5. Concrete sidewalks—After the same preparatory work, the road-bed is to be covered with a layer of sand, about 9 centimetres in thickness, and then the surface of the road is to be evenly coated with cushion mortar to a thickness of 1.5 centimetres or else to be covered with a layer of concrete, about 6.1 centimetres thick.

H. The standards in fixing the special limits below the beams of bridges

1. In constructing bridges over rivers and cannals, other than the Arakawa river and its tributary streams, the following conditions are to be observed:
  - (a) The beams of a bridge to be constructed at point within 110 metres (the distance to be computed from the crossing point of the river embankments) from the confluence of two streams are to have only one span, if it is possible.
  - (b) The frontal part of the bridge base should not be allowed, if possible, to project into the main stream of the river, further than the crossing point of the embankment direction and the water-level line below the "Mean Sea Level" within the Bay of Tokyo (1.112 metres,—the zero point by the water-level mark at Reiganjima, Tokyo).
  - (c) The supports of a bridge should not be constructed, if possible, in the mid-stream of a river.
2. In building a bridge over the river Arakawa or its tributaries, there must be left in existence, at the lower end of the beams of the bridge, a span of a width of more than 16.5 metres, or two or more spans with a width of more than 10 metres, at a height greater than 5.6 metres above the M. S. L. within the Bay of Tokyo (a little over 6.7 metres above the zero point by the water-level mark at Reiganjima, Tokyo). The suspension of floor beams arranged at an interval of over 4 metres, however, may be included within the limits just mentioned, provided that they do not exceed 1.2 metres in height.
3. In the case of a bridge built over the river Onagi, there must be left in being, at the lower end of the bridge beams, at least a span of a width of more than 9 metres, at a height of 4.1 metres above the

M. S. L. within the Bay of Tokyo ( a little over 5.2 metres above the zero point, by the water-level mark at Reiganjima, Tokyo).

4. In the case of the rivers Tate, Kita-Jukken, Nihonbashi, Kanda, Kamejima, Kyobashi, Sakura, Tsukiji (only the portion of the river, which was repaired by the Reconstruction Bureau) Kaede, Shiodome, Hakozaiki, Yoko-Jukken, Oyoko (except the course lower than the confluence with the Sendai-bori river), Genmori, Sendaibori, Shiohama (only the portion of the river from the point of joining with the river Heikyu down to the river mouth), and Naka-no-gawa, the bridge to be constructed over the stream concerned, must have at least one span left at the lower end of the bridge beams, of a width of more than 8.2 metres, at a height greater than 3.4 metres above the M. S. L. within the Bay of Tokyo (a little more than 4.5 metres above the zero point by the water-level mark at Reiganjima, Tokyo).
5. In the case of the rivers Tsukiji (except that portion of the stream, which was repaired by the Reconstruction Bureau), Soto-bori, Oyoko (the portion of the river below the point of confluence with the Sendai-bori river), Oshima, the eastern western branches of the Oshima river, southern branches of the Oyoko river, Abura-bori, Shiohama (the part of the river between the point of joining the Oyoko river and confluence with the river Heikyu), Higashi-horidome, Shin, Sanjukkenbori, Furu and Sanyabori (the stream below Yoshino bridge), the bridge to be built across the river concerned must have at least one span left at the lower end of the beams of the bridge, of a width of more than 8.2 metres, at a height greater than 3.15 metres above the M. S. L. within the Bay of Tokyo (a little over 3.25 metres above the zero point by the water-level mark at Reiganjima, Tokyo).
6. In the case of the rivers Hamacho, Ryukan, Sugabori, Gokenbori, Rokkenbori and Hikifune, the bridge to be thrown across the stream should have at least one span left, of a width of more than 8.2 metres, at a height greater than 25 metres above the M. S. L. within the Bay of Tokyo (a little over 3.6 metres above the zero point by the water-level mark at Reiganjima, Tokyo).

## III. Principles followed in the planning and construction of canals and creeks

### A. Conditions to be observed in determining the formation of canals

1. The river embankments, already in existence, if utilizable after strengthening, must be made use of, as far as possible.

2. A curve of a particularly acute angle must be moderated as much as possible.
3. The removal of permanent buildings which have survived the earthquake with comparatively slight damage should be avoided as much as possible.
4. Care must be taken to minimize the removal or transference of underground structures and fixtures.
5. In constructing bridges, care must be exercised to avoid a sharp angle, as far as possible.
6. If possible, no road or way must be built near or along a canal.
7. Places of common use are to be provided at as many spots as practicable.
8. The corners and nooks of the crossing or branching points of canals must be rounded or smoothed away, in accordance with the directions given elsewhere.

B. The rounding or smoothing away of the corners of the crossing point of a canal

As a general rule, the angle of the corners at the crossing point of a canal, must be rounded or smoothed away with a radius roughly as follows:

(a)  $R = 1.5 L - (\frac{W}{2} + c)$ . This is applicable to the point of confluence with the Sumida river, of a canal east and west of the said river.

(b)  $R = L - (\frac{W}{2} + c)$ . This is applicable to canals west of the Sumida river (except at the point of confluence with the said river). In the equations given above:

“R” means the radius of the part to be rounded (in metres).

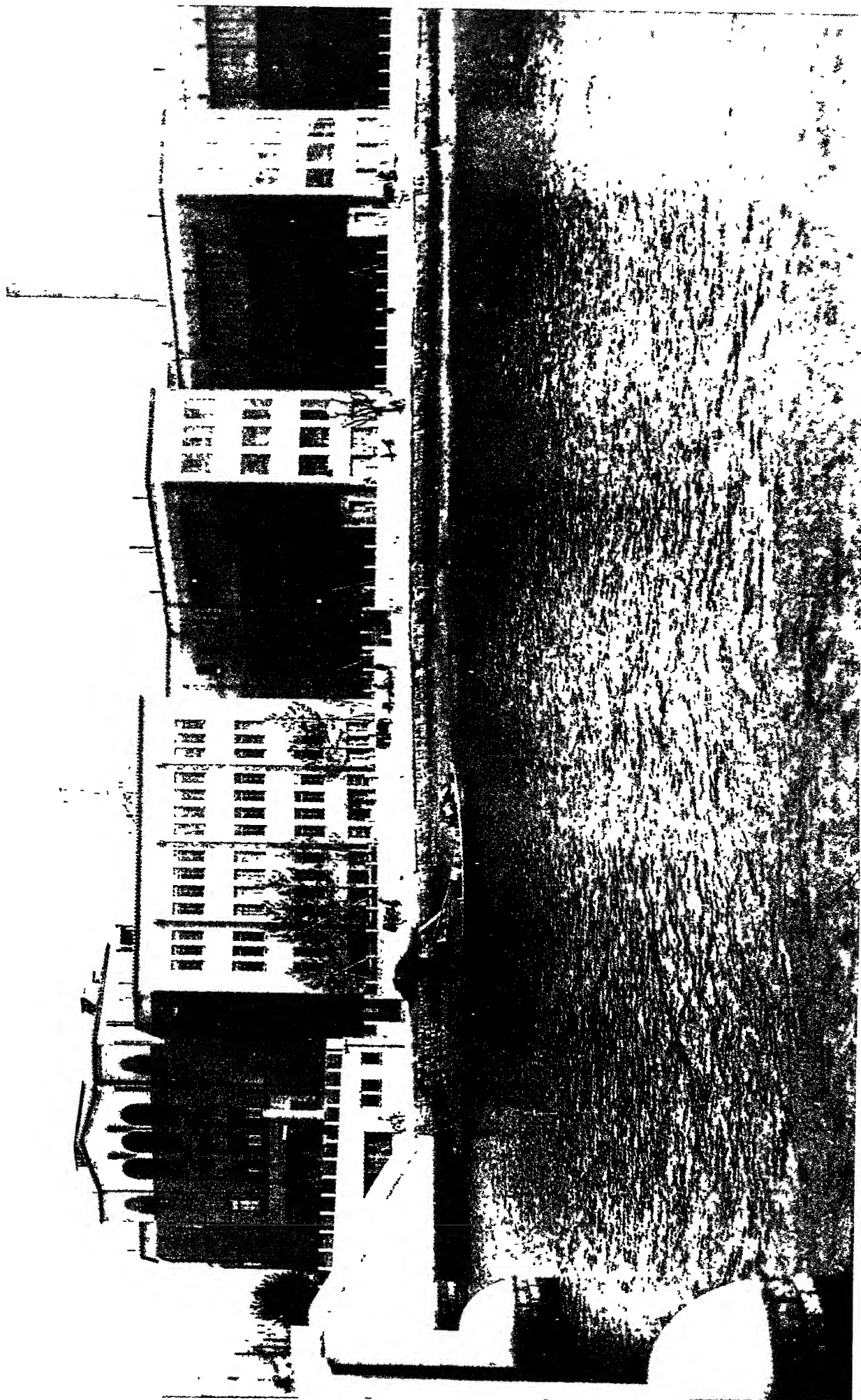
“L”       ”       length of vessels and rafts navigating.

“W”       ”       width of vessels and rafts navigating.

“C”       ”       constant number 1.8 metres.

“L” as mentioned above is to be made 28.2 metres, in case the canal crossing the river has a width of 18.18 metres or more. If one of the canals crossing each other has a width less than 18.18 metres, “L” is to be made 15.2 metres. As regard “W,” it must be understood that in case both canals have the same width of 18.18 metres or more, “W” is to be made 6.3 metres, while, if one





The Fraternity Hospital built by the earthquake donation funds given by the Americans, Honjo ward



Earthquake destruction to the building of Tokyo Imperial University



Tokyo Imperial University as seen to-day

less, it is to be reduced to 3.6 metres. However, where, in consequence of special circumstances, the above mentioned radius cannot be employed, and the magnitude of the radius actually calculated does not reach ten metres, the rounding or smoothing away of the corners is to be effected in a straight line.

of the canals crossing each other has a width of 18.18 metres or

C. General principles to be followed in fixing the width of canals and the depth of water

1. The standard size and capacity of vessels permitted to navigate canals are as follows: Width, 6.3 metres; depth, 1.8 metres; freight weight, 100 tons. But on the Onagi river, they are—width, 6.3 metres; depth, 2.1 metres; freight, 130 tons.
2. By “vessels moored on a canal” are meant those which lie at anchor with gunwales parallel to the canal-shore, at a distance of 2.27 metres from it.
3. The standard distance between the gunwales of the vessels navigating is 0.99 metres. The standard width and depth of the canals as well as the number of vessels which may navigate simultaneously on the same canal are as follows:

The width, etc. of the canals is fixed on the double assumption that there are two vessels navigating at the same time, while there is a vessel lying moored at each of the shores, and that even at low tide, the canals are freely and perfectly navigable.

Canals	No. of vessels navigating at the same time	Width of canals	Depth of canals
Kaede-gawa, Sakura-gawa, Kyobashi-gawa, Shiodome-gawa, Higashi-horidome-gawa, Tsukiji-gawa (a portion), new-cut-canal connecting Tsukiji-gawa and Kaede-gawa . . . . .	2	33 metres	1.8 metres
Yokojukken-gawa, Oshima-gawa . . . . .	3	40	1.8
Kanda-gawa, Nihonbashi-gawa, Tsukiji-gawa (a portion) . . . . .	4	47	1.8
Onagi-gawa . . . . .	5	55	2.1

### SECTION III

#### DIVISION OF BUDGET FOR EACH EXECUTIVE ORGAN

- I. Budget for Enterprises to be undertaken by the Minister of Home Affairs:

## THE RECONSTRUCTION OF TOKYO

Repair of trunk roads and ways . . . . .	¥257,458,400
Repair of canals and creeks . . . . .	28,879,065
Laying-out of new large public parks . . . . .	11,900,000
Land readjustment . . . . .	8,750,000
Total . . . . .	¥306,987,465

Subventions for the Construction of Buildings within the "fire prevention zones". . . . .	18,000,000
(included in 20,000,000 yen, the grand total of the Budget)	
Total . . . . .	¥324,987,465

### II. Budget for Enterprises executed by the Governor of Tokyo Prefecture:

Repair of the "State roads" . . . . .	¥ 11,254,036
Repair and improvement of roads and ways . . . . . (circular as well as radiating)	7,500,000
Educational arrangements . . . . .	3,250,000
Total . . . . .	¥22,004,036

### III. Budget for undertakings carried out by the Mayor of Tokyo

Land readjustment . . . . .	¥ 95,951,000
Repair and improvement of "auxiliary roads" . . . . .	80,114,314
Rebuilding of roads and bridges . . . . .	13,684,221
Improvement of sewerage systems . . . . .	40,211,321
Laying out of small public parks . . . . .	13,752,175
Arrangements for proper disposal of garbage and refuse . . . . .	1,850,000
Construction of the central wholesale market . . . . .	15,000,000
Construction of buildings for elementary schools . . . . .	41,056,583
Arrangements for social work . . . . .	4,525,000
Construction of municipal hospitals . . . . .	3,100,000
Work of prompt city water supply, and the restora- tion of former condition thereof . . . . .	10,000,000
Arrangements for electric enterprises . . . . .	26,080,000
Total . . . . .	343,324,614
Grand Total . . . . .	¥690,316,115

### Additional Budget for Minor enterprises to be executed by the Mayor of Tokyo City:

Construction of branch establishments affiliated with the central wholesale market . . . . .	¥ 6,400,000
Emergency adjustment of the sewerage system . . . . .	1,600,000

# FINAL APPROVAL OF THE SCHEMES AND PLANS FOR RECONSTRUCTION

Laying water pipes and water mains for City water supply .....	15,000,000
The 2nd-term restoration scheme for electrical enterprises .....	30,840,000
Total .....	53,840,000
Grand Total .....	¥744,156,115

## EXPENDITURES FOR THE RECONSTRUCTION ENTERPRISE CARRIED OUT BY TOKYO MUNICIPALITY

KINDS	AMOUNTS IN BILLION YEN										
	0	1	2	3	4	5	6	7	8	9	10
Repair and Construction of Roads											
Land Readjustment											
Repair and Construction of Roads and Bridges											
Improvement of Sewerage Systems											
Public Parks											
Arrangements for Garbage Disposal											
Primary School Construction											
Building Construction for Central Wholesale Market											
Social Welfare Works											
Construction of Municipal Hospitals											
Restoration of City Water Supply Works											
Building Construction for Branch of Central Wholesale Market											
Emergency Adjustment of Sewerage Systems											
Restoration of Electric Tramway Enterprises											
Restoration of Electric Power Supply Enterprises											

Next is given the detailed Budget for the undertakings to be effected by the City of Tokyo, as tabulated according to the fiscal years over which the same is spread.

# THE RECONSTRUCTION OF TOKYO

Kinds of Expenditure	Total	Fiscal		
		1923—24	1924—25	1925—26
Ordinary Finance .....	¥315,244,614	¥5,189,000	¥49,413,969	¥53,609,571
Expenditure for Repair and Construction of Roads and Ways, and the Readjustment of Land .....	174,065,314	2,139,000	19,565,965	23,289,965
Expenditure for Repair and Construction of Roads and Ways ...	80,114,314	1,290,000	11,237,965	13,197,965
For Business.....	3,664,021	—	374,855	446,931
For Actual Execution .....	76,450,293	1,290,000	10,863,110	12,751,034
For Land Readjustment .....	93,951,000	849,000	8,328,000	10,092,000
For Business .....	6,639,713	30,343	658,439	890,757
For Actual Work .....	87,311,287	818,657	7,669,561	9,201,243
Expenditure for the Reconstruction of the Capital .....	133,179,300	3,050,000	29,150,000	28,825,000
For Reconstructing Roads and Bridges .....	13,684,221	600,000	3,500,000	3,000,000
For Repair and Construction of Roads and Ways .....	1,032,377	76,203	338,225	395,921
For Reconstructing Bridges.....	1,020,009	—	376,918	115,306
For Repairing Bridges .....	10,464,301	523,697	2,635,886	2,368,409
For Framing Plans and Overseeing the Actual Execution .....	1,167,534	100	148,971	120,364
Expenditure for the Improvement of the Sewerage Systems .....	40,211,321	1,500,000	8,400,000	8,400,000
For Business.....	2,965,236	72,000	457,800	504,972
For Repair of Damages caused by the Earthquake .....	318,369	302,003	16,366	—
For Completing 1st-term Engineering Work .....	226,317	220,008	6,309	—
For 2nd-term Engineering Work...	12,897,680	892,989	3,338,978	3,324,000
For 1st Division of 3rd-term Engineering Work .....	4,222,481	—	900,000	1,520,268
Expenditure for 3rd Division of 3rd-term Engineering Work.....	17,274,634	13,000	2,764,891	2,400,760
For Purchase of Machinery and Tools .....	1,239,000	—	580,000	480,000
For Miscellaneous Engineering Work .....	1,067,604	—	335,656	170,000
Expenditure for Public Parks.....	13,752,175	950,000	1,900,000	1,900,000
For Purchase of Necessary Land..	12,715,873	932,000	1,701,000	1,701,000



# FINAL APPROVAL OF THE SCHEMES AND PLANS FOR RECONSTRUCTION

Year						
1926—27	1927—28	1928—29	1929—30	1930—31	1931—32	1932—33
¥49,371,359	¥54,351,781	¥70,902,498	¥21,215,045	¥10,275,172	¥916,219	¥ —
24,452,965	37,464,369	53,104,378	9,010,000	5,038,672	—	—
16,949,965	16,085,369	17,632,179	2,513,104	1,207,767	—	—
792,050	578,859	574,781	548,778	347,767	—	—
13,157,915	15,506,510	17,057,398	1,964,326	860,000	—	—
7,503,000	21,379,000	35,472,199	6,496,896	3,830,905	—	—
412,774	816,413	1,244,678	1,492,960	1,093,349	—	—
7,090,226	20,562,587	34,227,521	5,003,936	2,737,556	—	—
23,500,000	15,364,755	15,655,159	11,841,302	4,876,865	916,219	—
3,000,000	765,217	818,000	1,001,004	1,000,000	—	—
196,069	22,800	3,159	—	—	—	—
27,885	10,951	279,228	191,721	18,000	—	—
2,648,264	595,800	363,310	602,689	726,246	—	—
127,782	135,666	172,303	206,594	255,754	—	—
8,400,000	3,761,321	8,400,000	797,229	552,771	—	—
532,934	288,394	480,000	464,813	164,323	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
3,022,000	257,126	1,910,874	18,463	133,250	—	—
279,732	510,428	923,765	38,661	49,627	—	—
4,350,413	2,540,457	4,925,361	117,105	162,647	—	—
89,000	50,000	40,000	—	—	—	—
125,921	114,916	120,000	158,187	42,924	—	—
1,900,000	1,840,949	2,675,124	2,392,999	193,103	—	—
1,701,000	1,793,449	2,632,624	2,244,800	10,000	—	—

# THE RECONSTRUCTION OF TOKYO

Kinds of Expenditure	Total	Fiscal		
		1923—24	1924—25	1925—26
For Providing Trees and Plants...	¥ 159,047	¥ —	¥ 42,450	¥ 42,450
For Engineering Work .....	216,716	—	46,300	46,300
For Repair and Construction .....	430,148	—	75,250	75,250
For Formulating Plans and Over- seeing Actual Execution .....	230,391	18,000	35,000	35,000
Expenditure for Providing Arrange- ments for Proper Disposal of Gar- bage and Refuse .....	1,850,000	—	600,000	600,000
Purchase of Necessary Land .....	50,000	—	50,000	—
Constructing Necessary Buildings	782,444	—	356,890	230,879
Furnishing the Buildings .....	877,126	—	167,618	348,514
Formulating Plans and Overseeing the Actual Execution .....	140,430	—	25,492	20,607
Constructing Buildings for the Central Wholesale Market .....	15,000,000	—	4,500,000	5,250,000
Purchase of Necessary Land .....	8,389,351	—	4,304,472	2,243,028
Constructing Necessary Buildings	3,648,775	—	—	2,402,854
Furnishing the Buildings .....	2,088,787	—	—	450,903
Formulating Plans and Oversee- ing Actual Execution .....	873,087	—	195,528	153,215
Constructing Buildings for Primary Schools .....	41,056,583	—	8,000,000	8,000,000
Subventions for Constructing Buildings for Primary Schools...	39,705,560	—	7,850,659	7,822,657
Constructing Buildings for Prim- ary Schools under Direct Man- agement .....	245,272	—	—	—
Formulating Plans and Oversee- ing Actual Execution .....	1,105,751	—	149,341	177,343
Providing Arrangements for Social Works .....	4,525,000	—	900,000	925,000
New Establishment of Employ- ment Agencies .....	424,050	—	86,850	86,850
New Establishment of Crèches and Advisory Offices for Child- ren's Health .....	960,740	—	306,350	162,166
New Establishment of Women's Work Houses .....	544,100	—	30,500	185,960
New Establishment of Public Dining Halls .....	463,510	—	20,000	111,303



# FINAL APPROVAL OF THE SCHEMES AND PLANS FOR RECONSTRUCTION

Year						
1926—27	1927—28	1928—29	1929—30	1930—31	1931—32	1932—33
¥ 42,450	¥ —	¥ —	¥ 11,194	¥ 20,503	¥ —	¥ —
46,300	11,871	11,871	29,150	24,924	—	—
75,250	11,629	11,629	85,180	95,960	—	—
35,000	24,000	19,000	22,675	41,716	—	—
50,000	100,000	100,000	50,000	350,000	—	—
—	—	—	—	—	—	—
31,690	51,535	36,450	10,500	64,500	—	—
—	37,950	54,250	21,340	247,454	—	—
18,310	10,515	9,300	18,160	38,046	—	—
750,000	486,460	1,148,816	726,383	1,222,122	916,219	—
—	410,000	692,975	641,830	97,046	—	—
607,074	35,345	121,369	—	297,149	184,984	—
39,154	—	290,000	—	715,232	593,498	—
103,772	41,115	44,472	84,553	112,695	137,737	—
8,000,000	8,000,000	1,610,000	6,491,428	955,155	—	—
7,643,373	7,774,109	1,474,061	6,355,800	784,901	—	—
185,644	59,628	—	—	—	—	—
170,983	166,263	135,939	135,628	170,254	—	—
900,000	360,808	703,219	282,259	453,714	—	—
86,850	89,650	73,850	—	—	—	—
200,603	64,205	106,088	25,347	95,981	—	—
136,537	20,220	88,116	21,617	61,150	—	—
90,979	58,815	92,872	41,919	47,622	—	—

# THE RECONSTRUCTION OF TOKYO

Kinds of Expenditure	Total	Fiscal		
		1923—24	1924—25	1925—26
New Establishment of "Cheap Lodging Houses" .....	¥ 1,406,780	¥ —	¥ 430,334	¥ 266,565
New Establishment of City Pawn-Shops .....	152,250	—	4,550	81,929
New Establishment of Public Bath-Houses .....	111,684	—	—	10,920
New Establishment of Training Office .....	149,000	—	—	—
Formulating Plans and Overseeing Actual Execution .....	312,886	—	21,416	19,307
Construction of Municipal Hospitals	3,100,000	—	1,350,000	750,000
Purchase of Necessary Land .....	698,503	—	698,503	—
For Construction .....	1,376,948	—	520,418	355,608
For Furnishing .....	822,377	—	92,216	309,309
Miscellaneous Engineering Works	60,722	—	5,713	47,583
Formulating Plans and Overseeing Actual Execution .....	141,450	—	33,150	37,500
Constructing Buildings for Branch of the Central Wholesale Market .....	6,400,000	—	698,004	1,494,606
Purchase of Necessary Land .....	3,680,787	—	697,459	1,461,623
For Construction .....	1,944,793	—	545	1,200
For Furnishing .....	709,854	—	—	31,783
Formulating Plans and Overseeing Actual Execution .....	64,566	—	—	—
Emergency Adjustment of Sewerage Systems .....	1,600,000	—	—	—
For Business .....	86,936	—	—	—
Engineering Work .....	1,469,064	—	—	—
Reserve Funds .....	44,000	—	—	—
Special Finance .....	81,920,000	3,000,000	10,651,908	9,440,107
Water Supply Finance .....	25,000,000	3,000,000	3,000,000	3,000,000
Restoration of City Water Supply Works .....	10,000,000	3,000,000	3,000,000	3,000,000
Restoration of Water Supply Arrangements .....	5,300,000	3,000,000	1,003,574	1,083,624
For Business .....	303,243	141,419	57,098	65,521
Engineering Works .....	4,996,757	2,858,581	946,476	1,018,103

# FINAL APPROVAL OF THE SCHEMES AND PLANS FOR RECONSTRUCTION

Year						
1926—27	1927—28	1928—29	1929—30	1930—31	1931—32	1932—33
¥ 283,953	¥ 78,456	¥ 275,822	¥ 25,790	¥ 40,860	¥ —	¥ —
21,800	15,324	13,822	15,325	—	—	—
52,236	2,235	138	46,155	—	—	—
—	—	—	39,820	109,180	—	—
22,042	31,903	53,011	66,286	98,921	—	—
500,000	50,000	200,000	100,000	150,000	—	—
—	—	—	—	—	—	—
263,938	39,459	101,293	48,070	48,162	—	—
210,467	4,441	85,907	43,330	76,707	—	—
595	3,600	1,800	—	1,431	—	—
25,000	2,500	11,000	8,600	23,700	—	—
1,012,648	996,207	1,475,157	363,743	359,635	—	—
866,963	177,224	303,856	170,222	3,440	—	—
132,359	630,785	790,602	106,785	282,517	—	—
13,326	188,198	380,226	41,881	54,440	—	—
—	—	473	44,855	19,238	—	—
405,746	526,450	667,804	—	—	—	—
21,948	23,654	36,334	—	—	—	—
371,798	483,796	613,470	—	—	—	—
12,000	14,000	18,000	—	—	—	—
5,826,209	7,656,101	12,371,562	16,343,715	10,290,398	4,520,000	1,820,000
1,072,456	2,361,722	7,347,822	3,846,000	1,372,000	—	—
575,000	175,000	250,000	—	—	—	—
82,789	7,013	123,000	—	—	—	—
17,036	4,269	17,900	—	—	—	—
65,753	2,744	105,100	—	—	—	—

# THE RECONSTRUCTION OF TOKYO

Kinds of Expenditure	Total	Fiscal		
		1923—24	1924—25	1925—26
Expediting the Work of Extension of Water Supply .....	¥ 4,700,000	¥ —	¥ 1,996,426	¥ 1,916,376
For Business .....	506,115	—	128,909	160,423
Purchase of Necessary Land ...	269,582	—	1,017	226,396
Engineering Work .....	3,922,008	—	1,866,500	1,529,557
Reserve Funds .....	2,295	—	—	—
Laying Water Mains and Pipes .....	15,000,000	—	—	—
For Business .....	1,186,122	—	—	—
Examining Materials .....	200,514	—	—	—
Repair and Construction .....	59,984	—	—	—
Engineering Work .....	13,313,921	—	—	—
Reserve Funds .....	239,459	—	—	—
Finance under Jurisdiction of the Electric Department .....	56,920,000	—	7,651,908	6,440,107
Restoration of Electric Tramway Enterprises .....	23,560,000	—	7,124,117	6,028,106
Purchase of Necessary Land .....	940,550	—	85,192	479,236
Constructing Railed Tracks .....	3,224,806	—	840,739	1,548,945
Constructing Electric Routes .....	2,848,475	—	631,763	733,984
Power-Generating Station .....	1,511,729	—	77	897
Power-Transforming and Switching Stations .....	721,856	—	273,195	78,125
Rolling Stocks .....	8,423,631	—	4,672,840	2,182,553
Buildings and Structures .....	4,135,143	—	165,235	588,500
Machinery and Tools .....	332,120	—	130,581	55,460
For Business .....	1,001,377	—	114,060	208,809
Institute for Investigation and Study of Electricity .....	125,151	—	29,111	95,603
Subsidy in Connection with Contracts for Engineering Works and for Supplies .....	237,318	—	181,324	55,994
Reserve Funds .....	57,844	—	—	—
2nd-term Restoration of the Electric Tramway Enterprises .....	29,000,000	—	—	—
Purchase of Necessary Land .....	8,588,536	—	—	—
Constructing Railed Tracks .....	14,352,906	—	—	—

# FINAL APPROVAL OF THE SCHEMES AND PLANS FOR RECONSTRUCTION

Year						
1926—27	1927—28	1928—29	1929—30	1930—31	1931—22	1932—38
¥ 492,211	¥ 167,987	¥ 127,000	¥ —	¥ —	¥ —	¥ —
128,400	46,947	41,436	—	—	—	—
42,169	—	—	—	—	—	—
321,642	121,040	83,269	—	—	—	—
—	—	2,295	—	—	—	—
497,456	2,186,722	7,097,822	3,846,000	1,372,000	—	—
61,556	229,431	358,942	333,485	202,708	—	—
—	42,619	112,360	35,935	9,600	—	—
—	7,042	47,940	2,727	2,275	—	—
435,900	1,907,630	6,457,227	3,387,838	1,125,326	—	—
—	—	121,353	86,015	32,091	—	—
4,753,753	5,294,379	5,023,740	12,497,715	8,918,398	4,520,000	1,820,000
3,080,207	2,010,469	1,452,860	1,764,241	1,100,000	1,000,000	—
14,223	—	325,050	36,849	—	—	—
352,474	131,782	163,963	56,203	76,500	54,200	—
260,436	157,761	179,862	395,803	273,600	215,266	—
876,699	348,295	270,101	15,660	—	—	—
18,090	34,822	32,626	158,993	110,966	15,039	—
708,881	781,366	77,991	—	—	—	—
549,932	456,021	336,837	943,821	505,102	589,695	—
80,381	5,120	1,878	28,906	15,000	14,800	—
218,654	95,302	64,552	100,000	100,000	100,000	—
437	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	28,012	18,832	11,000	—
458,574	2,660,073	3,002,879	10,038,474	7,500,000	3,520,000	1,820,000
—	500,000	36,386	1,502,150	5,000,000	1,550,000	—
212,453	1,580,101	1,947,360	6,274,088	1,682,610	1,374,322	1,281,972

# THE RECONSTRUCTION OF TOKYO

Kinds of Expenditure	Total	Fiscal		
		1923—24	1924—25	1925—26
Electric Routes.....	¥ 3,560,267	¥ —	¥ —	¥ —
Machinery and Tools.....	86,000	—	—	—
For Business.....	2,118,247	—	—	—
Reserve Funds.....	294,044	—	—	—
Restoration of Electric Power Supply Enterprises .....	2,520,000	—	527,791	412,001
Purchase of Necessary Land .....	35,200	—	36	35,164
Buildings and Structures .....	577,079	—	8,426	11,353
Electric Routes.....	992,820	—	410,923	248,031
Power-Transforming and Switch Stations .....	697,517	—	27,522	66,890
Laying on Electricity in Households .....	121,679	—	55,121	23,390
For Business.....	62,765	—	25,763	20,300
Reserve Funds.....	32,940	—	—	6,873
2nd-term Restoration of Electric Power Supply Enterprises .....	1,840,000	—	—	—
Electric Routes .....	1,687,140	—	—	—
For Business.....	91,054	—	—	—
Reserve Funds .....	61,806	—	—	—
Grand Total .....	¥ 397,164,614	¥8,189,000	¥60,065,877	¥63,049,678

## SECTION IV

### ORGANIZATION OF THE MUNICIPAL EXECUTIVE BODY FOR REALIZATION OF THE RECONSTRUCTION SCHEMES

At first, the business connected with the various plans for the rebuilding of the Capital pertained to the jurisdiction of the Investigation Bureau of the Municipal Office of Tokyo; but in 1924, the Reconstruction Work gradually entered on the second stage of actual execution, so that necessity was keenly felt for the creation of special organs for realization of the reconstruction schemes. In March, 1924, there were, accordingly, called into being two new Departments known as the "Temporary Construction Department" and the "Land Readjustment Department." The duty of the former was to see the general business

# FINAL APPROVAL OF THE SCHEMES AND PLANS FOR RECONSTRUCTION

Year						
1926—27	1927—28	1928—29	1929—30	1930—31	1931—32	1932—33
¥ 53,472	¥ 300,168	¥ 730,814	¥ 1,784,209	¥ 377,390	¥ 155,678	¥ 158,536
—	22,242	20,283	15,475	10,000	10,000	8,000
192,649	257,562	268,036	350,000	350,000	350,000	350,000
—	—	—	112,552	80,000	80,000	21,492
1,147,000	443,208	—	—	—	—	—
—	—	—	—	—	—	—
379,445	177,855	—	—	—	—	—
208,239	125,627	—	—	—	—	—
516,231	86,874	—	—	—	—	—
21,809	21,359	—	—	—	—	—
8,351	8,351	—	—	—	—	—
12,925	13,142	—	—	—	—	—
67,972	190,629	568,001	695,000	318,398	—	—
51,166	172,855	527,308	648,744	287,067	—	—
16,806	17,774	18,838	18,841	18,795	—	—
—	—	21,855	27,415	12,536	—	—
¥55,197,568	¥62,007,832	¥83,274,060	¥37,558,760	¥20,565,570	¥5,436,219	¥1,820,000

relating to repair, improvement, reconstruction, and so on, of buildings and structures, as well as reconstruction of those elementary schools which had fallen victims to the Earthquake and Fire. On the other hand, the latter organ was ordained exclusively to attend to all kinds of business concerned with the readjustment of land. At the same time, all other branches of the Reconstruction Undertaking, namely, the arrangements for roads and streets, bridges, public parks, sewerage systems and city water supply, public sanitation, as well as social works, were given over to the charge and care of the respective Sections interested.

Later, November of the same year, saw the creation of a new organ styled the "General Reconstruction Business Department," whose duty was to ensure efficient control and supervision of, as well as to promote harmonious co-operation between, the different organs for the conduct of the town planning

schemes and the Reconstruction Work in general. In December, 1926, however, the "General Reconstruction Business Department" and the "Land Readjustment Department" were abolished, and their places were taken by a newly created organ named the "Reconstruction Business Department."

Apart from these municipal executive organs for Reconstruction work, there was organized in October, 1923, by the City Assembly of Tokyo, a committee named the "Reconstruction Committee," composed of certain members of the City Assembly and honorary members of the City Council, for the sole object of investigating and deliberating on important business connected with the work of city restoration. After the establishment of the Committee, indeed, they held more than a score of meetings and decided to pass, after due discussion and consideration, as many as thirty important propositions laid before them. Thus, the City authorities have shown themselves always earnestly solicitous to do all in their power to achieve the great object they had in view in connection with the complete resuscitation of the Capital then lying in a state of miserable desolation.

Let us put the names of Municipal Authority for the sake of reference:

#### MEMBERS OF THE CITY ASSEMBLY (1923)

Mr. Kaichi Tokura	*Mr. Tokichi Shimada
* " Mitsuyuki Segawa	" Takayoshi Nakada
* " Seisaku Osaki	" Yonetaro Saegusa
* " Hachiroemon Kakimi	" Samataro Kojima
" Eitaro Matsuzaki	* " Tadayuki Yoshikawa
" Kenji Endo	" Shichiro Kojima
" Naoichi Hashimoto	* " Kan-emon Yoshida
" Ichiro Suzuki	" Seiji Miyajima
" Buntaro Kasahara	" Mankichi Inoue
" Takehiko Takuma	" Jirokichi Gokita
* " Asagoro Ogonuki	" Tokuji Yamaguchi
* " Yoshinari Honda	" Kyuzo Katayama
" Bukichi Miki	* " Yasuzo Tanaka
" Chosuke Sato	" Katsuya Onaka
" Shigeaki Wakabayashi	" Nitaro Ito
* " Fusaji Tsubono	* " Yujiro Iriyama
" Mataichi Fukuda	" Mosaburo Yamamoto
" Tatsuji Kondo	" Jusha Tsumura
* " Shunji Nakamura	* " Masaomi Ando
" Hogara Akiyama	* " Yoshitaro Kamada



# FINAL APPROVAL OF THE SCHEMES AND PLANS FOR RECONSTRUCTION

” Shojiro Amari	* ” Toichi Kaneko
* ” Yakichi Suzuki	” Kichibei Nishimura
* ” Shigetaro Watanabe	” Tomisaburo Nakamura
” Tsuneichiro Muramatsu	” Eizaburo Kawai
” Kamekichi Yamazaki	* ” Miyokichi Kokue
” Yaichiro Terada	” Umekichi Kosaka
* ” Keikichi Ono	” Toyokichi Oiwa
” Sanyu Kubo	* ” Shichibei Komori
” Kumakichi Oishi	Count Yasutoshi Yanagisawa
* Mr. Yasuo Nagamachi	” Masami Aritake
” Kinzaburo Kurata	” Hajime Matsunaga
” Nobuyasu Takeshita	* ” Banroku Ono
” Genzaburo Moriwaki	” Kensaku Murayama
” Masaichi Utsunomiya	” Shotaro Hayakawa
” Kaname Matsuo	* ” Sutejiro Kunieda
* ” Isaburo Hara	” Masaichi Komata
” Kichiji Hasegawa	” Mankichi Nakamura
” Tomigoro Oguri	” Ichiro Hatoyama
” Takashi Suzuki	” Tsunematsu Kinoshita
* ” Tatsujiro Motomiya	” Hisashi Isobe
* ” Kaitsu Morihara	* ” Tatsuo Kotaki
” Ryoza Yanagida	* ” Shichiro Takizawa
” Teitaro Nakaminami	* ” Shotaro Kadono
* ” Kashichiro Hirohashi	” Shunta Takahashi

(\* indicates the member of Reconstruction Committee)

Members of the Reconstruction Committee (appointed from among the Honourable Aldermen of the City Council):

Mr. Eitaro Matsuzaki	” Shigeaki Wakabayashi
” Tsuneichiro Muramatsu	” Masami Aritake
” Shunta Takahashi	

Next are given the names of Principal Leaders of the Tokyo Municipality, who took charge of the Municipal Administration connected with the City Reconstruction Work, from the time of disaster to the final completion of the Restoration.

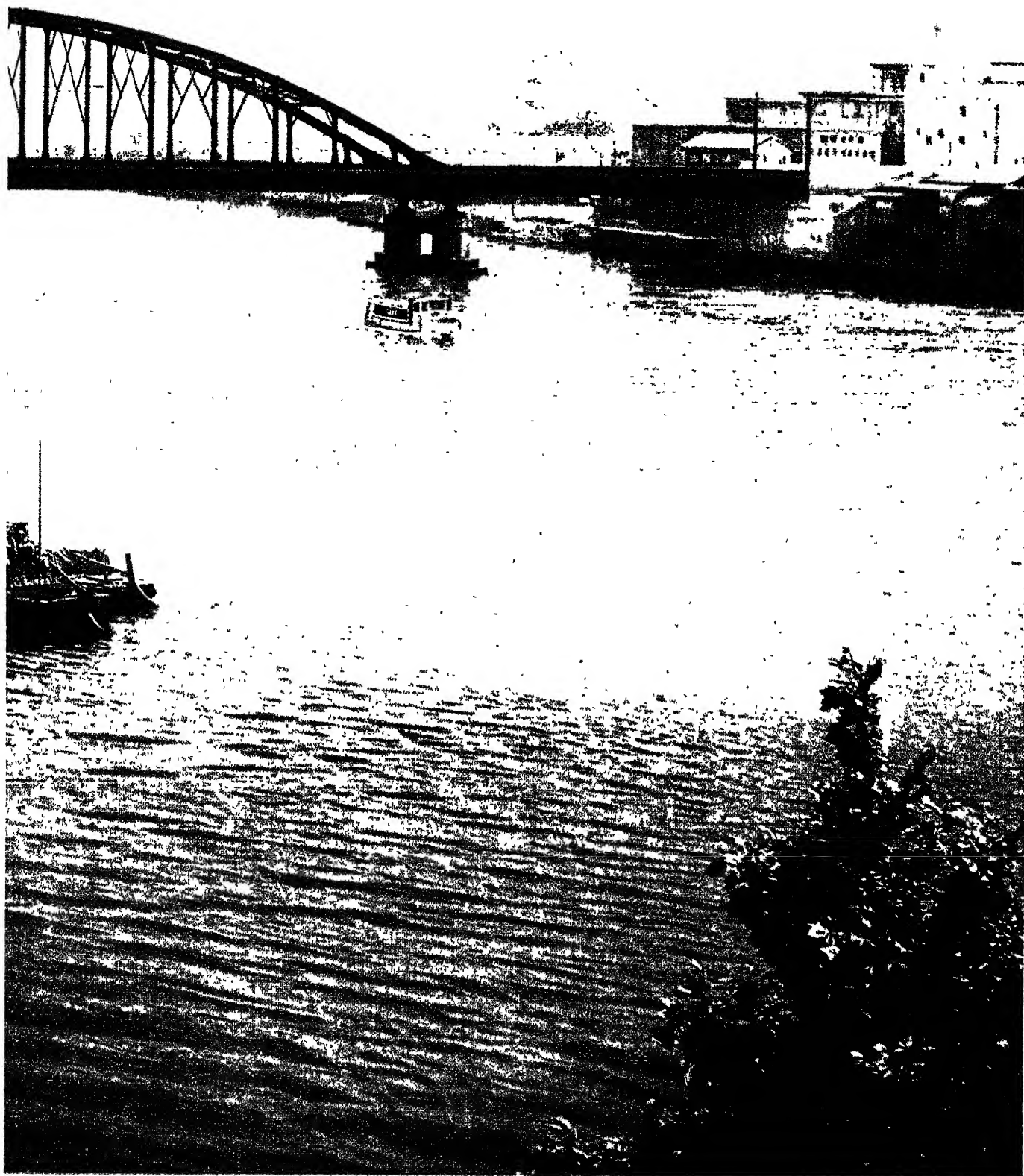
# THE RECONSTRUCTION OF TOKYO

	1923	1924	1925
Mayor .. . . . .	Mr. Hidejiro Nagata	Mr. Hidejiro Nagata	Mr. Zeko Nakamura
Advisers .. . . . .	{ Viscount Ei-ichi Shibusawa —————  Mr. Toshio Mawatari Mr. Katsutaro Tajima Mr. Shigeru Yoshida	Viscount Ei-ichi Shibusawa —————  Mr. Toshio Mawatari Mr. Katsutaro Tajima Mr. Shigeru Yoshida	Viscount Ei-ichi Shibusawa  Mr. Ryota Daido  Mr. Tadahiko Okada Mr. Yoshisuke Tazawa Mr. Gisaburo Tanuma
Treasurer .... . . . .	—————	Mr. Seiga Miyama	Mr. Seiga Miyama
Vice-Treasurers .. . . . .	{ ——— —————	Mr. Noboru Kumano Mr. Senjo Ogi	Mr. Noboru Kumano Mr. Senjo Ogi
Director of Finance Department.....	—————	—————	—————
Director of Education Department .....	—————	—————	Mr. Masanori Oshima
Director of Social Work Department.....	—————	Mr. Toshio Mawatari	Dr. Keiki Yabuki
Director of Public Health Department.....	—————	—————	Mr. Seizo Toda
Director of Water Works Department .....	Mr. Katsutaro Tajima	Mr. Katsutaro Tajima	Mr. Orizo Ogawa
Director of Roads Engineering Department....	Mr. Sukihiko Niwa	Mr. Sukihiko Niwa	Mr. Hikoshichi Maki
Director of Civil Engineering Department.....	—————	—————	—————
Director of Electric Department .....	Mr. Hampei Nagao	Mr. Toshio Mawatari	Mr. Ryota Daido
Director of Temporary Construction Department.	—————	Dr. Riki Sano	Dr. Riki Sano
Director of Land Readjustment Department....	—————	Mr. Tozaburo Tsukida	Mr. Tozaburo Tsukida
Director of General Reconstruction Business De- partment .....	—————	—————	Mr. Yoshisuke Tazawa
Director of Reconstruction Business Department..	—————	—————	—————

# FINAL APPROVAL OF THE SCHEMES AND PLANS FOR RECONSTRUCTION

1926	1927	1928	1929	1930
Mr. Takio Izawa	Mr. Hiromichi Nishikubo	Mr. Otohiko Ichiki	Mr. Zenjiro Horikiri	Mr. Hidejiro Nagata
Viscount Ei-ichi Shibusawa	Viscount Ei-ichi Shibusawa	Viscount Ei-ichi Shibusawa	Viscount Ei-ichi Shibusawa	Viscount Ei-ichi Shibusawa
Mr. Ryota Daido	Mr. Danroku Shono	_____	_____	_____
Mr. Tsurukichi Maruyama	Mr. Masanori Katsu	Mr. Giichi Ono	Mr. Yukichi Shirakami	Mr. Yukichi Shirakami
Mr. Yasunori Yamaguchi	Mr. Ichiro Onishi	Mr. Takeshi Araki	Mr. Kotaro Tanaka	Mr. Shinzo Kikuchi
Mr. Tadao Matsumoto	Mr. Tadao Matsumoto	Mr. Naka Funata	Mr. Hisatada Hirose	Mr. Takashi Totoki
Mr. Seiga Miyama	Mr. Seiga Miyama	Mr. Seiga Miyama	Mr. Senjo Ogi	Mr. Senjo Ogi
Mr. Noboru Kumano	Mr. Noboru Kumano	Mr. Noboru Kumano	Mr. Yoshisada Hirano	Mr. Yoshisada Hirano
Mr. Senjo Ogi	Mr. Senjo Ogi	Mr. Senjo Ogi	Mr. Kikujiro Ishizaki	Mr. Kikujiro Ishizaki
_____	_____	Mr. Jikichi Imamura	Mr. Kotaro Tanaka	Mr. Shinzo Kikuchi
Mr. Toshitaka Fujii	Mr. Toshitaka Fujii	Mr. Toshitaka Fujii	Mr. Toshitaka Fujii	Mr. Toshitaka Fujii
Mr. Tsurukichi Maruyama	Mr. Norizo Mikuriya	Mr. Naomiki Hirose	Mr. Naomiki Hirose	Mr. Sei-ichiro Yasui
Mr. Tadao Matsumoto	Mr. Tadao Matsumoto	Mr. Naka Funata	Mr. Yukichi Shirakami	Mr. Sei-ichiro Yasui
Mr. Orizo Ogawa	Mr. Orizo Ogawa	Mr. Orizo Ogawa	Mr. Orizo Ogawa	Mr. Zenro Hara
Mr. Hikoshichi Maki	_____	_____	_____	_____
_____	Mr. Hikoshichi Maki	Mr. Shinzaburo Kon	Mr. Shinzaburo Kon	Mr. Shinzaburo Kon
Mr. Ryota Daido	Mr. Danroku Shono	Mr. Ichiyo Okochi	Mr. Ichiyo Okochi	Mr. Toshio Mawatari
Mr. Yasunori Yamaguchi	_____	_____	_____	_____
Mr. Tozaburo Tsukida	_____	_____	_____	_____
Mr. Yasunori Yamaguchi	_____	_____	_____	_____
_____	Mr. Ichiro Onishi	Mr. Inao Ikebe	Mr. Shigeyoshi Fukuda	_____





Attraction of the River Sumida

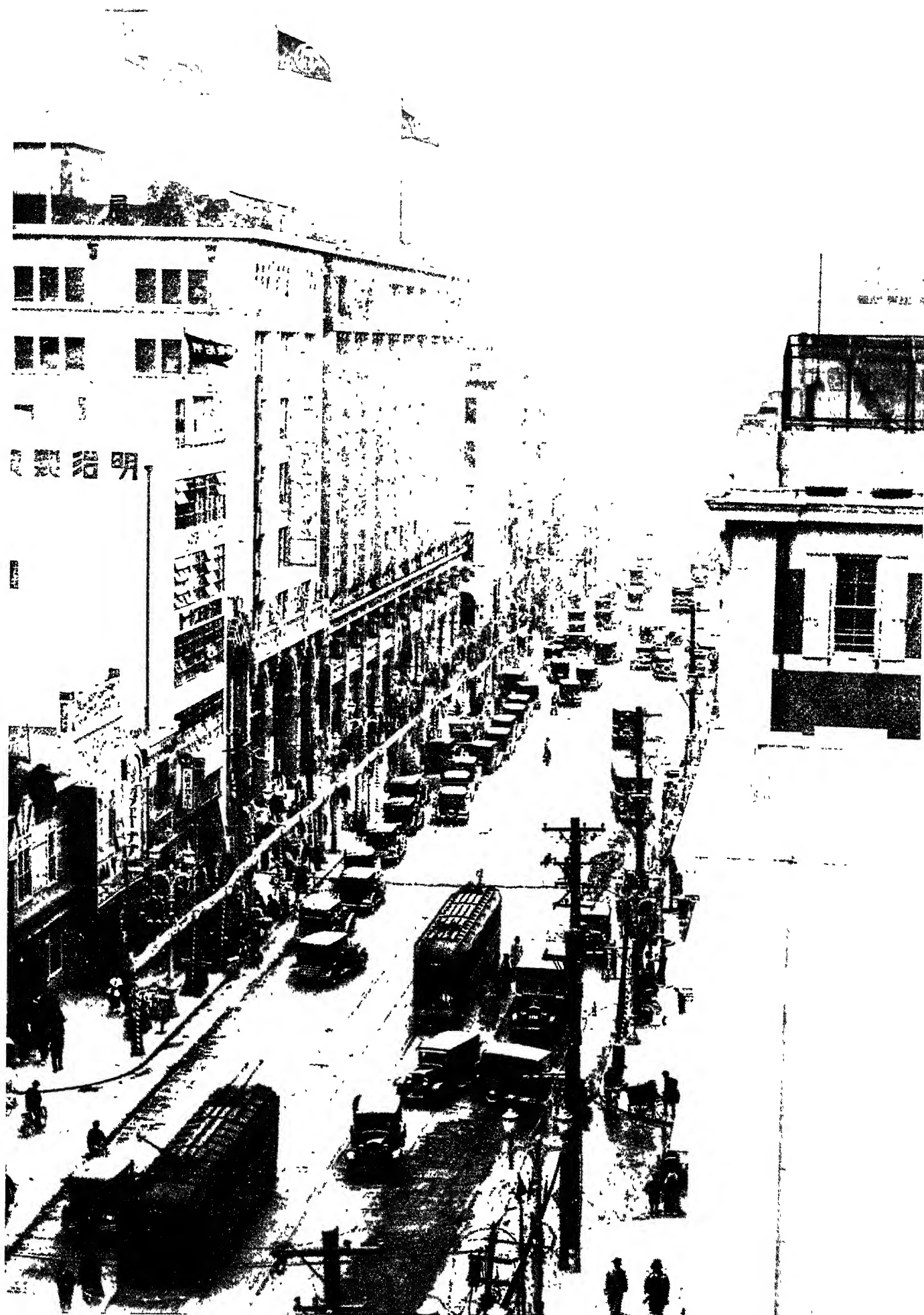


BOOK III

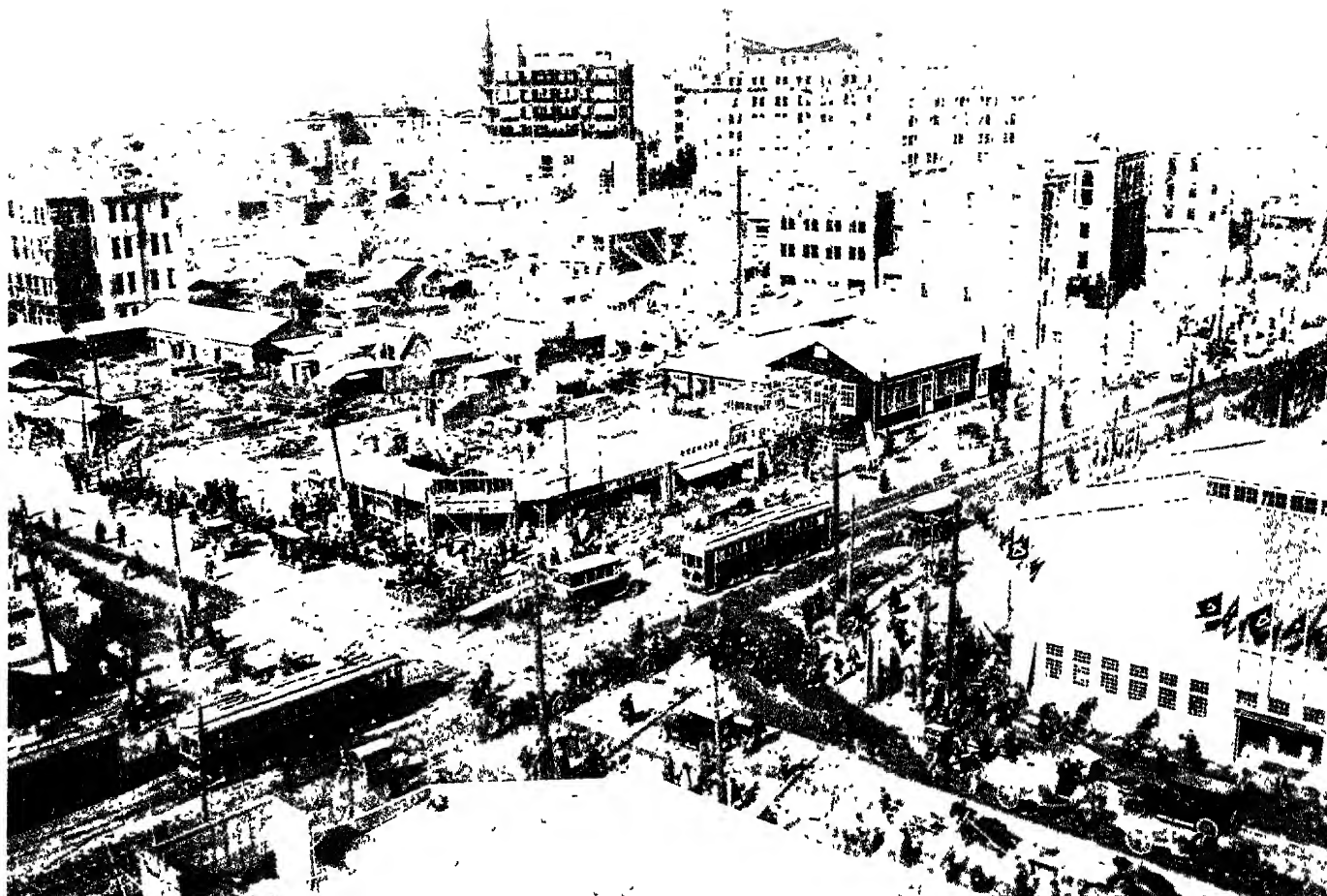
RECONSTRUCTION WORK







"Ginza" street, the civic heart of the Capital, taken recently



Nihonbashi districts, the centre of commerce, rising up with "barrack houses," soon after the disaster



The same districts after adjusted by the Reconstruction Work

# CHAPTER I

## Land Readjustment

### SECTION I

#### GENERAL REMARKS

Immediately after the occurrence of the Earthquake, the "Board of Capital Reconstruction" formed a plan for conducting a land readjustment scheme with regard to nearly 30,413,223.13 square metres out of the total area of the fire-desolated districts, which amounted to some 34,677,685.94 square metres. For this purpose, the whole area of residential land included within this area marked out for the execution of the prescribed land readjustment process,—roughly 23,477,685.94 square metres—was cut up into sixty-five sections, and of them fifteen sections were given over to the Home Minister for the practical execution of land adjustment, while the remainder was to be undertaken by the municipality of Tokyo. To facilitate the enterprise, therefore, the City newly established a special organ, named the "Land Readjustment Department," which name was later altered to the "Reconstruction Business Department." Afterwards, in view of the urgent necessity of accelerating the undertaking of reconstruction, the City decided to obtain State aid in carrying out the land readjustment project with regard to twenty sections out of the total of fifty land sections for which it was principally responsible.

Now, to assist the understanding of the uninitiated, we may explain the meaning of the term "land readjustment." It means, in brief, the work of promoting and increasing, in a rational way, the utilizability of the residential ground as contained in a given plot of land; that is to say, by effecting the exchange and combinations, or making alterations in the division and shape, or again by carrying out a transformation or change with respect to the existing roads and ways, rivers and canals, or public parks, and so on. In the practical execution of readjustment work, a land section to be subjected to the process of readjustment is made, for convenience' sake, a unit of land readjustment; that is to say, a "readjustment sector." And the residential plots included within this sector are collectively looked upon as a whole *bloc* of land, from which, however, the whole land area needed for public use, that is, necessary for the purpose of land readjustment enterprise, is to be deducted, the remainder being partitioned and given over to the original owners of the lands or to their lessees,

proportionately to the original value of the different residential plots or leased lands.

To be more precise, the superiority or advantage of land readjustment essentially lies in the following points, when compared with the ordinary method of "land appropriation," as it is chiefly carried out by means of "exchange of land plots":

(1) As in the case of "land appropriation," there is no necessity for the removal of the people inhabiting the places on either side of the road lines, as the unavoidable consequence of their widening.

(2) Irregularity of shape in existing residential land plots, and other inconveniences, will be eliminated, as a radical and fundamental alteration is effected with regard to residential lands, and in consequence, "exchange of lands" is carried out. Moreover, the value or utility of these land plots will be increased, as they will all come to be situated on or along the newly created road lines, in consequence of the execution of readjustment.

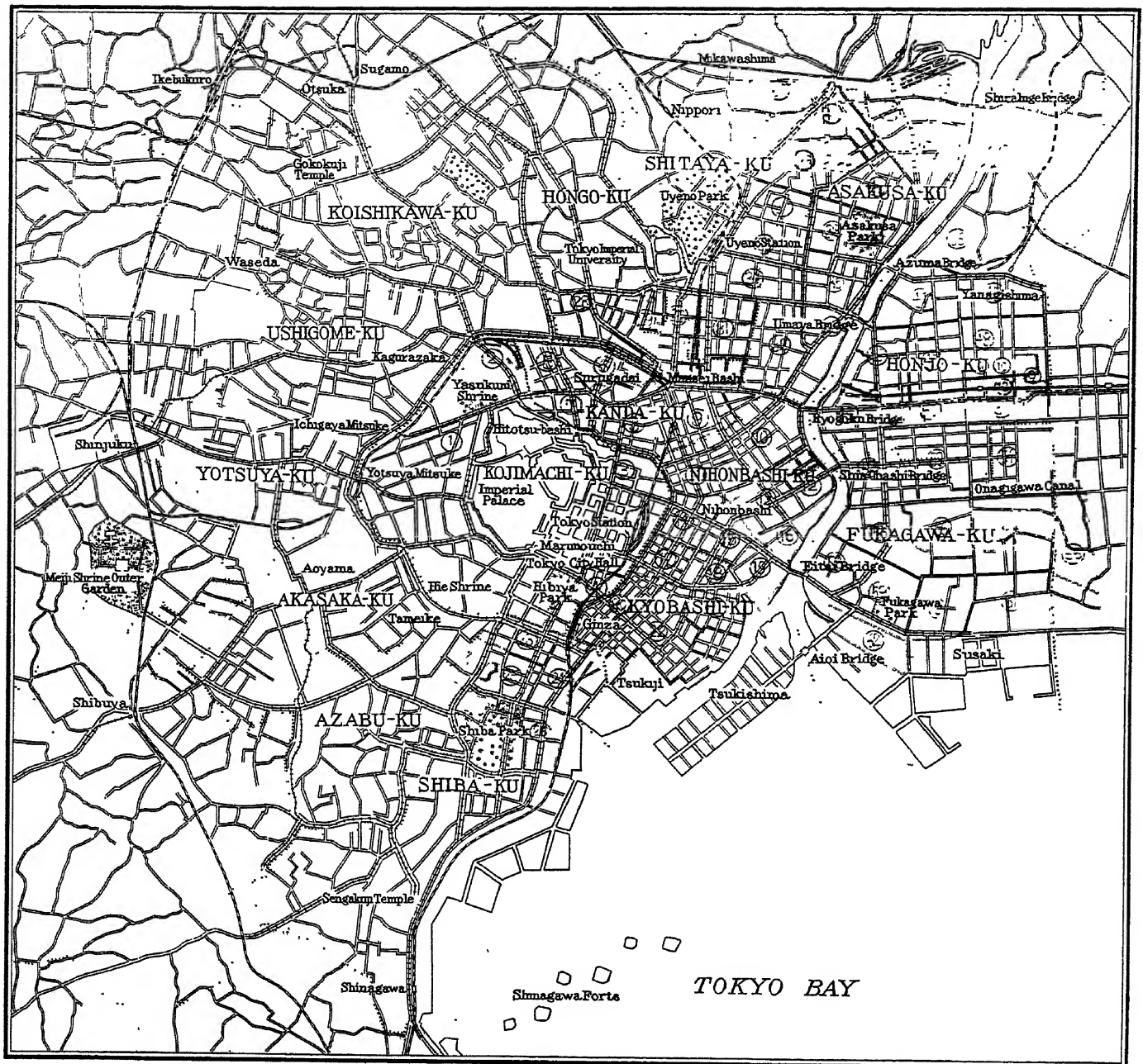
(3) In conducting land readjustment, condemned area, which is an inevitable result of the public appropriation of land, is in principle, to be furnished gratuitously either by the owners of land or the lessors. Only in cases where it exceeds a certain fixed limit, proper indemnification is made by the authorities.

Accordingly, as in the case of public appropriation of land, this method has the merit of making unnecessary the purchasing of the whole of the condemned area which is produced as the unavoidable result of the process of land readjustment.

Especially, as in cases like the present, where a drastic and radical reform was to be effected in the system of road lines, whereby it became necessary to create a complicated ramification of roads and ways, running in all directions, if they should have chosen to have recourse to the method of purchasing, the necessary consequence would have been the creation of unlimited numbers of residential land plots of irregular shapes and inconvenient dimensions,—a fact which would be more than likely to throw in the way of the great work of land readjustment difficulties and inconveniences sure to upset the whole plan of the undertaking. This was the sole reason why the authorities, seeing no other good way, decided to adopt the method of "exchange of land plots," or, in other words, the method of so-called land readjustment.

On the other hand, there was an unquestionable necessity of carrying out, as early and quickly as possible, the process of land readjustment with respect to the whole area of those districts which had been swept by the devastating flames. Therefore, as a preliminary step, there was enacted a new law named "Law relating to special city planning," and it was decided that the process

# LAND READJUSTMENT



## EXPLANATION :

- |     |  |     |  |
|-----|--|-----|--|
| ①   | Sectional Number of Land Readjustment            | —   | Lands without execution of Land Readjustment       |
| --- | Division of Sections (Carried out by Government) | --- | Division of Sections (Carried out by Municipality) |





of special city planning, as purviewed by the same law, should be compulsorily carried out either by the administrative authorities or by the public body concerned. Further, formal recognition was vouchsafed, on the one hand, to the compulsory inclusion even of those plots of land which had buildings standing on them, into the scheme of land readjustment, while, on the other, there was newly created a reasonable system by which proper indemnification came to be allowable in a case where the condemned area of residential land situated within a given sector, which would need to be appropriated for public use, as the result of readjustment process, should exceed 10 percent of the total area of residential lands included within the same land sector. Again, on the other side, there was separately organized a special advisory organ called "Committee for Land Readjustment," the members being composed of those persons freely and separately elected from among the land-owners and also the lessors, alike living within the same land sectors destined for the process of land readjustment. As to the planning of "land to be exchanged," the process of "exchange of land," as well as the proportionate division of the money granted in indemnification, as mentioned above, it was fixed that the said Committee for Land Readjustment should be referred to for advice and proper decision on these subjects.

In fact, we may say, without reproach of exaggeration, that the present project of land readjustment planned and devised for practical execution over such an extensive area and in civic districts with such a dense population housed in a literally endless succession of dwellings, really bee-hive fashion, is truly without parallel or example both at home and abroad. At the initial stage of enterprise, the real nature or meaning of the work was not thoroughly understood by the general public; while, on the other side, the authorities were confronted, in the practical conduct of the scheme, with a highly complicated condition of private rights and interests, mutually enterlacing and entangling in a way apparently delicate and indissoluble, so that it was but natural that at first there was a loud cry of the public raised in opposition to the project of land readjustment.

In this state of things, the Government promptly saw the necessity of backing up vigorously the municipal authorities; and so it tried all ways and means, for several months from April, 1924, for the purpose of enlightening the public on the precise nature and significance of land readjustment. Thanks to this governmental endeavour in the way of propaganda, the people gradually came to open their eyes, once so stubbornly blind, to the real facts of the case; and, with the passing of time, were successfully convinced that the work of land readjustment was inseparably connected, in the very nature of the thing, with the grand undertaking of reconstruction of the Capital. We are very

glad that the tireless exertions both of the Government and the municipal authorities thus bore fruit in the end. Thus, it was that those vociferous cries of opposition gradually subsided, and there were comparatively but few litigious cases consequent on the actual execution of the land readjustment project; or, to be concrete, there were on record only 65 petitions, 31 administrative litigations, and 50 civil action brought to court.

Below we give a concise description of the actual processes of the projected land readjustment work.

Before proceeding actually to set about the enterprise of land readjustment, the following steps were necessary to be taken:

(1) Due notification of the land limits as well as the land sector or sectors marked out for readjustment.

(2) Election of the Land Readjustment Committee.

After these two preliminary conditions having been properly complied with, the actual execution of land readjustment was ready to be commenced. And the processes of the execution were to be as follows:

(a) To carry out, as regards every individual land sector, an investigation and survey with regard to the existing condition of the buildings and land plots, and, on the strength and basis of the data thus gained, to prepare a map showing, in detail, the actual shape and condition of the land plots compressed in the same land sector or sectors as well as the buildings and houses standing thereon.

(b) To conduct an investigation with respect to rights and interests of every description.

(c) To frame a plan concerning the "exchange of land."

For this purpose, to formulate a plan covering the disposition and situation of the "lands to be exchanged," as well as a plan showing the areas of such lands. These two plans, accompanied with the appraisals of the value of the lands both before and after the execution of land readjustment, were to be referred to the Land Readjustment Committee for deliberation and counsel.

(d) To institute an investigation concerning the uses and construction of, as well as the various rights regarding, the houses and buildings, and also other kinds of structures; next, to formulate a plan for removal, to indicate the pre-arranged sites of "exchange lands," and then finally to issue an order of removal.

(e) To decide the sum of money to be granted in indemnification, to compensate for the possible damage or loss occasioned in consequence of the removal thus necessitated.



## LAND READJUSTMENT

(f) In case the "exchange land" officially indicated as the new site for the buildings to be removed, should be found unfit for the purpose of constructing buildings thereon, necessary measures to be taken beforehand so as to make it serve the proper purpose for which it was destined.

(g) After the completion of the removal of houses and buildings, and other structures, the formal procedure of "exchange of land" to be regularly conducted; at the same time; the liquidation money to be collected and paid, and also the indemnity to be paid to the proper party concerned.

(h) To take proper steps for registration of lands and buildings, as well as for evaluation and formal indication of the value thus appraised, with regard to every plot of land concerned.

As to investigation concerning the internal fittings of houses and buildings, such as water and gas supply, electric lighting, and so on, it was required to be made every time those houses and buildings should be removed. As regards underground fixtures and structures, as well as structures on roads and ways, a plan covering these was to be formed soon after the completion of the plan for roads and streets, and the actual execution of such plan was to be begun with the parts which were not likely seriously to interfere with the execution of the work of removing houses and buildings, and of other kinds of engineering work.

## SECTION II

### ADJUSTMENT OF LAND

#### 1. Defining of land sectors and the notification thereof

Delimitation of Sectors—In deviding into a number of sectors, every tract of land marked out for readjustment, the standardized area of each land section to undergo the process of adjustment was to be roughly 330,578.51 square metres; and such land sections should be bounded on every side, as far as possible, by rivers or roads, taking, of course, into due consideration the actual disposition, in their vicinity, of administrative districts, as well as commercial, industrial and residential districts, solely for the object of making their boundaries at once distinct and definite. And the whole area of land to be submitted to the process of adjustment, which covered virtually the entire fire-swept districts both within the City and in the neighbouring suburban localities, was divided into sixty-five land sections. And this fact was duly made known to the general public by official notification by the Minister of Home Affairs and the Mayor of Tokyo, who were the persons held responsible for the actual conduct of the work of land readjustment, thus:

## THE RECONSTRUCTION OF TOKYO

(a map of the land section to receive readjustment)

(1) To be executed on the responsibility of the Minister of Home Affairs  
(Date of Notification)

(2) To be conducted by the Mayor of Tokyo  
(Date of Notification)

### 2. Election of the Land Readjustment Committee

Each land section for readjustment had its own Committee of land Readjustment, whose members were to consist of the same number of persons separately elected from among the land-owners and the lessors of land, both living in the same readjustment land section concerned.

In the City of Tokyo, the formal definite number of the members of the said Committee was determined by taking into consideration the area of the land comprised within the section and the number of the land-owners residing in it. The said definite numbers of the members of the Committee were as follows:

Number of Committee-men to be elected from among land-owners . . . . .	142
Number of Committee-men to be elected from among Lessors of land . . . . .	142
Total . . . . .	<hr/> 284

### 3. Investigation as to land plots and rights and interests relating thereto

The investigation respecting the land and the rights and interests relating thereto, is, needless to say, a process of great importance, providing, as it does, a main basis and indispensable data in devising a plan for "exchange of land," and also in the actual execution of the process of "exchange of land." At that time, such investigation need to be carried out quickly and accurately, as was naturally demanded by the general nature and circumstances of the enterprise. However, there was a serious stumbling-block in the way, for almost all the official papers and documents hitherto preserved in the archives of public and Government Department had been irreplaceably consumed by the conflagration; and so there was absolutely nothing left to furnish any materials in this respect. To make the matter still worse, the land-owners did not yet incline to feel any safety and, in consequence, could not naturally be induced to settle in their former places of residence. These things, indeed, combined to make the work

of investigation extremely difficult and painstaking. The authorities concerned, therefore, spared no effort in promoting the efficiency of the officials employed in the work; and, by way of reinforcing their deficient power, also succeeded in obtaining the assistance of the "Reconstruction Bureau."

And, as is evident, in the investigation concerning land, the investigation as to the particulars about land, such as the area, the grades of land, and so forth, as were mentioned in the registration books, was, of course, alike necessary and important. Moreover, as the authorities were to grant indemnity for damage or loss accrued in consequence of the execution of the undertaking, and also as the exact amount of such compensation was to be calculated and determined on the exclusive basis of the residential land-plots concerned, investigation was equally necessary concerning the actual condition and use of such land.

Further, in the present land readjustment enterprise, besides landowners, all those persons were embraced in the category of "parties interested," who held the superficies, the perpetual tenant-right, on the lease; also those persons who held the lease of land, in accordance with the provisions of Article 24 of the "Law concerning the State-owned Estates," or again buddhist temples or shrines which were charged with the control and supervision of State-owned churchyards or cemeteries. Consequently, investigation was duly conducted with regard to all of these persons and establishments. Again, the inclusion in the scheme of land readjustment of Crown lands, State-owned land tracts, lands destined for official use, public owned lands, places noted for scenic beauty or for historic associations, ancient burial places or ordinary grave-yards, empty grounds within the precincts of temples or shrines, and grounds for use of railways or tramways, necessitated, in accordance with the provisions of the Law of Cadastration, the proper consent or agreement either of the Government Department concerned, the public body interested, or the person or persons who took charge of the lands concerned; the investigation respecting these lands was naturally undertaken chiefly by the tax offices or by the registry offices.

#### 4. Surveying

In carrying out the process of survey, it was divided into two distinct kinds, that is, an "actual survey" and a "planning survey." And what is immediately needful in the execution of readjustment scheme is nothing but an accurate map of actual survey. But as we already stated in the last paragraph, the Earthquake conflagration reduced to ashes all those indispensable original survey maps carefully kept at the official establishments concerned; it now became imperative to conduct an actual survey of the existing condition of the streets and blocks, as well as of the exact situation of the principal buildings

and various other structures. On the other hand, reference to the rough maps kept at the Geographical Section of the Tokyo Municipal Office was necessary for the compilation and charting of the actual configuration of the land readjustment regions. By these two means, indeed, the municipal authorities put forth all possible efforts to achieve their arduous object in view. In April, 1924, their worthy attempt was at last crowned with full success; that is, they had been able to compile a basis chart (scale: 1/600) as regards each sector for land readjustment; and this basic map was destined to serve as chief guide in the carrying out of a further surveying operation with respect to the actual topographical conformation of every land section for readjustment. On the other hand, the real need for a planning survey was sure to become apparent with the gradual progress of the realization of the scheme of "exchange of land"; and so each land sector was subjected to the same kind of surveying process.

To describe somewhat more in detail; when the new site of "exchange land" was once decided, the authorities in charge at once proceeded properly to mark off the ground in question; and then, as a next step, to draw a 1/300 scale chart with regard to the same plot of land, in order to furnish data likely to be necessary when determining its exact area. After the real area of the "exchange land" had thus become ascertained, another "staking off" operation was again to be carried out on the spot. Thus, due indication was given to the interested parties concerning the new plot of land they were to get "in exchange," while facilitating, at the same time, the speedy realization of the process of removal. Besides, these various kinds of surveying, they carried out, as necessity and occasion arose, the "level survey" and "corrective survey" with regard to every land section, as part of the "actual survey."

##### 5. Evaluation of land and the rights relating thereto

In the actual execution of land readjustment, the decision of the value of land, both before and after the conduct of the adjustment process, for determining the plan of "exchange of land," is a most important matter, as it is to serve for a concrete basis in the calculation of the sum of indemnity and also of that to be paid in liquidation.

(1) Where it was to serve as a Standard in devising the plan of "exchange of land," and also where the sum to be given in liquidation is to be of land. But in the present enterprise be given in exchange" was to be granted change of land value was necessarily soea, grade and so on of the original tract of the fact that the schemes included of land readjustment, the fluctuations or calculated. In principle, "the land to considerable and frequent, as a result by taking into due consideration the armany and various big-scale plans for

making, repairing or improving roads and streets, opening or cutting canals, and so forth; and so the process of "land exchange," in consequence, could never be put into practice so simply and easily, guided merely by the area, grade, etc. of the plots of land concerned. For this purpose, therefore, it was imperative to make comparison of the value of the land alike before and after the execution of the readjustment process, and thus to introduce something of what is generally known as the method of "exchange of land on the basis of value." But in point of fact, the residential plots of land in the civic districts very markedly in actual value, even in cases where they were of the same area of extent, according to the length and width as well as the shape and dimensions; so much so, indeed, that it was literally beyond the bounds of technical possibility to carry out the process of "exchange of land" by making the values of the land-plot concerned precisely identical both before and after the execution of readjustment. This was the reason why the authorities tried to give satisfaction to the parties interested by means of payment of the difference in values in liquidation.

(2) When calculation was to be made of the money to be granted in indemnification with respect to the land plots concerned, in consequence of the execution of the land readjustment, a residential plot of land had come to lose ten percent, or more of its former area prior to the same operation, the authorities were required to grant a monetary indemnity for the diminished portion of the area, the calculation of the money to be thus given in compensation having to be conducted on the basis of the average value of the residential plots of land embraced within the same land sector marked out for land readjustment.

It is needless to say, therefore, that proper estimation of the value of land is really essential in connection with the calculation of the indemnity to be granted. Now, the actual state of things in sixty-three land sectors out of the sixty-five sectors included within the contemplated schemes of readjustment, was such that on the whole, the quantity of curtailment of the area of land in consequence of the same process exceeded, in all cases, the specified amount of ten percent, and so the granting of indemnity was necessary and unavoidable in every case.

As stated above, the evaluation of land stands in close and inalienable relation to the work of land readjustment, and the rationality or impropriety of the way of appraisal is necessarily calculated to affect the parties interested in a way and degree not at all to be made light of.

Now, in the present plan of readjustment, the evaluation of a great number of land-plots had to be carried out in the shortest possible period, as the inevitable result of which the various ways and methods hitherto generally

followed, such as, for example, reference to actual cases of transaction in land, and so on, were least likely to prove of any value, if at all, in the final attainment of the great object of the present undertaking of land readjustment.

The method and principle devised and adopted in the present instance in the evaluation of land were largely based on those pursued in the city of Cleveland in the United States, modified naturally as dictated by the peculiar circumstances prevailing in this country, so that they might be comparatively rational in application. But we must spare any detailed mention of this subject here. It may be said, however, that, as a matter of fact, the value of the civic residential land-plots is high in those parts which abut and are contiguous to the road lines; and that as the distance from the contiguous road lines increases, the value of the land plots concerned proportionately decreases. In view of this obvious fact, the present method of land evaluation was politic and wise enough to set up a definite standard value for the road lines running along the residential land plots. And this standard value was specially called "road line value." This "road line value," together with the depth of the land plots concerned, formed the basic factor in calculating and determining the value of the lands.

Further, as in the present undertaking of land readjustment, besides the land-owners, also those persons who had some sort of claim or right to the lands concerned had their share of interest to safeguard, the authorities also had to make special study as to the way of appraising each individual right and claim. In this country, the value of a lease in civic districts is largely determined by the situation or regional considerations of the lands held in lease; and so the authorities thought it convenient to fix beforehand a certain ratio with respect to the value of the lands, which was then looked upon as the ratio of the value of the land lease. This ratio, together with the value of the lands marked out in the way mentioned above, formed the basis of the evaluation of the lease and other sort of right and claim; and this ratio or percentage naturally varied according to the kind of right; but we shall give below the rates of the value of land lease generally:

1. Within the whole regions where special rates are applied, 50 percent without exception.
2. "A" rate ..... 35% to 40%
3. "B" rate ..... 25% to 30%
4. "C" rate ..... 20% to 25%

## 6. Planning of "Land Exchange"

The abowed object of the planning of "land exchange" is to effect the

alteration in the section and shape, the division and amalgamation, or the exchange of the plots of land, in order to promote the utility of the residential grounds,—the designing being based on plans approved and adopted by the Special City Planning Committee, with respect to roads, ways, and canals as well as public parks. And in the planning of “land exchange,” the chief and essential factor is, of course, the residential plots of land (including land on lease). Now, in the actual execution of this enterprise, it was made a general principle that the “land to be granted in exchange” should not be remote from the original site, and also that it should be the same in kind and identical in condition, class and grade, as those of the original land plots. Also, efforts were expended for lessening the amount of money to be collected and paid in liquidation, by judiciously regulating the value of the original land and that of the “land to be given in exchange.” And in the actual conduct of the undertaking, a considerable alteration was entailed in the condition of the land plots embraced within the land sectors, as the inevitable consequence of the plans, considered and decided by the Committee concerned, as regards roads, streets, and canals, as well as public parks. Moreover, the area of the residential land plots suffered, in consequence, a marked diminution. Further by this method, the rate of decrease in the area of residential grounds showed a perceptible difference, according to the “blocks” contained in the land sectors concerned, which contributed greatly to the difficulty in planning the enterprise. Therefore, it was that the authorities endeavoured to moderate the rate of decrease in land area, and so to facilitate the process of planning, by buying up the old residential land plots and applying these plots of land to the purpose of “residential land exchange” in general. Besides, the authorities also adopted a method of regulating the rate of decrease by allowing transference of the residential sites from one “block” to another.

For the sake of convenience in deliberation by the Committee concerned, the proposition concerning the situation of “exchange lands” was first brought up for discussion and deliberation, being followed by that concerning the area of these lands. Details as to the practical process of “exchange land” planning and so on, are omitted here, confining ourselves to only the tabulation of the areas of the residential land plots in each land sector, both before and after the land readjustment process, the areas of those plots rendered useless for residential purposes the rates of decrease, as well as the areas of the lands converted to purposes other than for residence.



## THE RECONSTRUCTION OF TOKYO

### LAND SECTORS FOR WHICH THE MINISTER OF HOME AFFAIRS WAS RESPONSIBLE

	sq. m.
Total area of Land Sectors . . . . .	6,261,397.94
Total area of residential lands before readjustment . . . . .	4,067,946.87
Total area of residential lands after readjustment . . . . .	3,991,587.70
Total area of lands rendered unfit for residential purpose . . . . .	76,359.17
Average rate of decrease in land sectors . . . . .	0.154
Total areas where rate of decrease exceeds 10% . . . . .	263,573.91
Total area of lands applied to purposes other than originally intended . . . . .	129,222.80
Average rate of decrease in land sectors after application of land plots to purposes other than originally intended . . . . .	0.130
Total area of lands bought up by City of Tokyo, out of land plots destined to be used for purposes other than originally intended . . . . .	13,431.20

### LAND SECTORS FOR WHICH THE MAYOR OF TOKYO WAS RESPONSIBLE

	sq. m.
Total area of land sectors . . . . .	24,904,867.52
Total area of residential lands before readjustment . . . . .	18,753,823.96
Total area of residential lands after readjustment . . . . .	15,892,127.06
Total area of lands rendered unfit for residential purpose . . . . .	2,861,696.89
The average rate of decrease in the land sectors . . . . .	0.152
Total areas where rate of decrease exceeds 10% . . . . .	1,008,480.99
Total area of lands applied to purposes other than originally intended . . . . .	692,308.69
Average rate of decrease in land sectors after application of land plots to purposes other than originally intended . . . . .	0.120
Total areas of lands bought up by City of Tokyo, out of those land plots applied for purposes other than originally intended . . . . .	113,229.95

The proportion of the area of "public utility lands" to the total area of the land sectors, in consequence of the planning of "land exchange," is tabulated as follows:





Hibiya cross-road before the disaster



The same road as seen to-day



Old view of "Ginza" street



The same street after the Reconstruction

## LAND READJUSTMENT

	Land sectors for which the Home Minister was responsible	Land sectors for which the Mayor of Tokyo was responsible	Total
	sq. m.	sq. m.	sq. m.
Total area . . . . .	6,261,397.94	24,904,867.52	31,166,265.46
Before land readjustment:			
Total area of "public utility lands" . . . . .	1,538,905.28	6,117,979.10	7,656,884.38
Proportion of the area of "public utility lands" to the total area of lands . . . . .	0.240	0.245	0.245
After land readjustment:			
Total area of "public lands" . . . . .	2,269,809.91	9,018,750.37	11,288,560.28
Proportion of the area of "public utility lands" to the total area of lands . . . . .	0.367	0.362	0.362

As to rights concerning land plots, other than that of lands lease they were all required to be properly and distinctly established *de novo* on the new "land plots given in exchange," irrespective of whether due registration had been already made or not.

### 7. Process of "Land Exchange"

The process of "Land Exchange" may be called the "great balancing" of the "liabilities and assets" of the land readjustment undertaking. Various sorts of rights subjected to changes and modifications as the result of land readjustment had to be confirmed and settled by this process of "land exchange." The authorities in charge of the execution of the readjustment project were authorized to carry out the process, if necessary, even before the completion of the projected scheme of readjustment over the whole extent of the land sectors under their respective direction, thus striving to ensure, as quickly as possible, settlement and stability of the various rights and claims of the landowners and other parties interested.

In carrying out the process of "land exchange," reference had first to be made to the Land Readjustment Committee concerned for counsel and opinion, and when the necessary decision was taken, due notification had to be made of the fact of carrying out the process of "land exchange," if the same

process was to be conducted in the land sectors falling under the direction of the Minister of Home Affairs; while in those for which the Mayor of Tokyo City was responsible, such notification had to be made only after the proper and express sanction of the Home Minister had been obtained. In both cases, the fact had to be duly notified to the registry office concerned. From the date of the notification, the "land given in exchange" was to be regarded in the same right and terms as the original land plot. And the right and obligation concerning the collection and payment of the money in liquidation, consequential to the process of "land exchange," was to be considered possible only as the consequence of carrying out the process of "land exchange."

### 8. Liquidation Money

Steps in regard the payment of liquidation money on exchange land were taken immediately after a report was received of the completion of the exchange.

In case there was any compensation money to be paid for the land or lease-hold in which liquidation money was to be collected, the former was to be applied to the latter. This method was followed in order to lessen and minimize the amount of liquidation money as much as possible. Should such sum reach more than 100 yen, payment in parts or divisions was to be allowed.

However, where rights to property were transferred before the collection or payment of the liquidation money, the parties to the transfer had to report such negotiations to the readjustment bureau. Then, on receipt of such report, the readjustment bureau would report to the above parties the amount of liquidation money to be borne by each. In this case the division of the liquidated money would be determined by the value of the property rights after the transfer.

The following table shows the amount of collection and compensation:

Kinds	Collection	Compensation
Department of Home Affairs . . . . .	¥10,251,526.69	_____
City of Tokyo . . . . .	21,821,586.86	¥27,000,032.48
Total . . . . .	¥32,073,113.55	_____

### 9. Compensation Money for Land

Compensation was granted to owners of residential land within the land readjusting district when the confiscated area under the land exchange plan exceeded by more than ten percent the former area. That is, compensation was given only for that part of the decrease in space over ten percent.

## LAND READJUSTMENT

Residential land referred to in the above category included lands other than roads, open spaces, dams and embankments, ditches and drainages, rivers, canals, parks and other public places.

In deciding on the above designation of residential land a compensation investigation committee composed of scholars and experts was organized to decide on the matter from the most impartial standpoint, in view of the reason for which compensation was to be paid.

In settling on the rate of compensation to be paid the individual land owner, it was arranged first to hear the opinion of the land readjustment committee which was well-versed in the affairs of the different districts and the amount determined by the compensation investigation committee. As mentioned before, expenditures occurred in relation to trunk roads and canals were to be borne by the State, while expenses connected with auxiliary roads and small parks were to be paid for by the municipality.

Since this undertaking was to be carried out as a part of other reconstruction project, there arose the question how to allot the compensation money to be borne by the State and the Municipality. As the result of conferences between the State and the Municipal Authorities, it was decided to allot compensation according to the uses to which the confiscated land was applied. This included land which was taken for construction of new roads and other public uses. In case the area of the new public lands after reconstruction showed an increase of more than ten percent in comparison with the former area, compensation was to be borne by the States if reconstruction for that area was to be undertaken by the State. Similarly, if the area was under the control of the Municipality, compensation was to be paid by the Municipality. Thus, when land decreased by the use of roads, consideration was given in the following order:

1. Its importance in relation with the land readjustment road system.
2. Its relation with the auxiliary road system; and
3. Its relation with the trunk road system.

With these basic considerations in mind, if the new area showed a decrease of more than ten percent in comparison with the area before reconstruction, compensation was to be borne by the State if the road construction was to be undertaken by the State, and by the Municipality if construction was carried on by the latter.

Again, the order of consideration for compensation of residential lands used for public purposes was as follows:

1. For use of land readjustment roads.

## THE RECONSTRUCTION OF TOKYO

2. For use of auxiliary roads.
3. For use of trunk roads and canals.
4. For use of small parks.
5. For use of electric enterprises, etc.

The following table shows the amount of compensation paid by both the State and the Municipality, as at the end of March, 1931.

Kinds	Compensated area	Compensation amount
By the Department of Home Affairs..	263,573.91 sq. m.	¥21,793,341.72
By the City of Tokyo.....	1,008,480.99	12,631,249.74
Total ..	1,272,054.90	34,424,591.46

### 10. Registration

Since land readjustment is a fundamental reform, there was the necessity of registering anew all lands and buildings which had been registered in the devastated area. The registration was to be undertaken by the official of land readjustment concerned.

All registration of land and buildings was to be suspended until the completion of the registration of the readjustment. Thus, efforts were made to make as short as possible the period of such suspension. The shortest was half a month and the longest one year, with the average four months.

### 11. Rate of Compensation depends on value of land

Since readjustment of the devastated area was a fundamental reform, it meant the transfer of new lands because the old area was destroyed. However, it was practically impossible to allot exactly the same area as before the readjustment; thus there arose the necessity of paying liquidation money. Besides, it was impossible to apply the former real estate value to the new exchanged land. According to the rules, the new land value had to be decided in the following manner: In case there was any increase in the public land after exchange, the increased area was multiplied by the average price of the former area and the result subtracted from the total value of the former land. The new figure was then the price for the newly created residential land and was assessed as such.

When report of the exchange of land or permission for such exchange was given, the individual carrying out the readjustment, reported the land appraisal plan to the Chief of the Taxation Bureau of that district and the rate of compensation was thus determined.



Sight of attraction from air: Ginza and its neighbor, with the buildings and structures almost rebuilt after the disaster





"Nakamise" at Asakusa Park, the most popular street for the visitors from country, photographed before the earthquake



'Nakamise' street just after the disaster

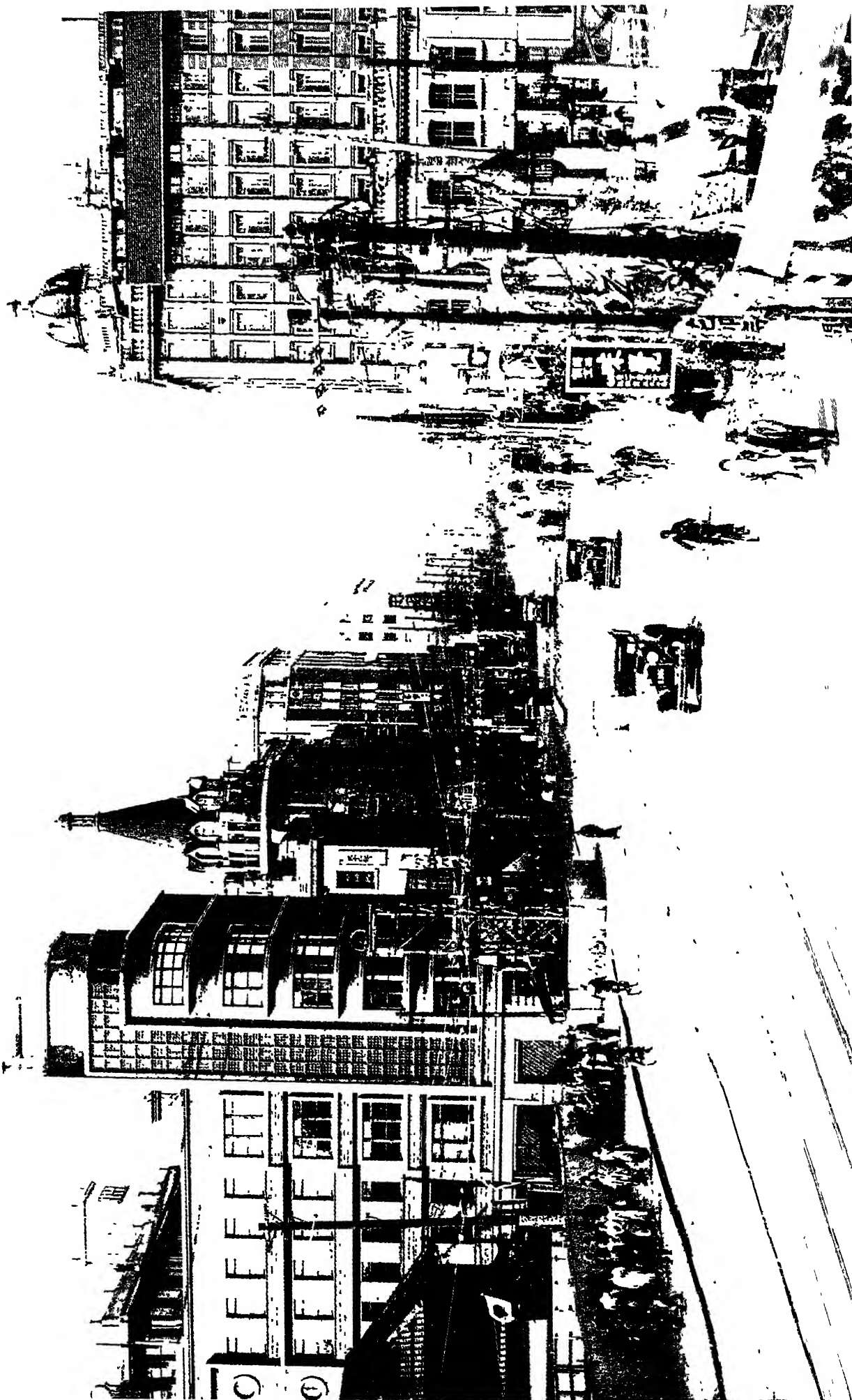




"Nakamise" regained with temporary tenement-stores, soon after the earthquake



The street achieved its completeness



"Kyobashi" street, the gate of "Ginza," the Broadway of the Capital

## LAND READJUSTMENT

### SECTION III

#### REMOVAL OF BUILDINGS AND OTHER STRUCTURES

##### 1. Removal Plan

As a general principle, it was natural for residential lands to be changed in position under the land readjustment system; and consequently, it was necessary to transfer buildings and other structures on former lands to new sites. Thus, as soon as the area of the exchange land was decided, an order was issued that the buildings were to be moved to the new address, allowing three months or more leeway in the execution of the order. However, in regard to barracks which were built before such exchange land could be designated, the readjustment committee experienced great difficulty and adopted the following plan. First they decided on the group of buildings to be moved within a designated spot; and then, using a map made from actual survey as a guide, they decided on the buildings to be moved and those to be left standing as they were. Following this, for those buildings which were to be removed, the following method of removal was decided upon: the order of the removal, the method of the removal work, and the period of the removal work.

##### A. Division into Removal Groups:

The main idea of removal by groups was to avoid confusion and afford an orderly process of reconstruction. The removal group was to be composed of 30 buildings or thereabouts. In some land sections there were 50 to 60 groups while in others there were over 100 groups.

##### B. Order of Removal:

Since buildings and other structures within the single land section were to be removed from one place to another and others moved to their places on the former sites, there arose the necessity for determining which buildings and structures were to be readjusted first. Thus, the buildings selected to be moved first were those which were to be built on vacant spaces. However, should there be no vacant space in the designated exchange land, or when the vacant space was too narrow, the following plan was adopted. Group buildings which needed only destruction of a part were selected first. In case, the above plan could not be followed in whole, the buildings which came nearest to fulfilling the above requirements were selected. In this instance, construction work on these buildings was temporarily suspended and they were used for removal purposes.

By temporary suspension of buildings is meant that buildings already on the site were dismantled, in case the newly designated exchange

land was unavailable for immediate use, and the materials temporarily assembled in a convenient place and construction work resumed later when the new land was available for use.

C. Method of Removal Work:

There were in the main, three methods by which the removal work was carried out: 1. Removal of entire buildings by pulling them away; 2. Dismantling and reconstructing on a new site; 3. Destruction of a part of a building. In applying the above three methods, consideration was given to conditions on the existing site and on the new land and in regard to construction itself. Thus, in some cases, one method alone was adopted, while in others the two methods were combined; and in some all three combinations were used. In case the above three methods could not be entirely applied, because of the changed condition of the new land, an entirely new method of removal work was undertaken.

D. Period for Removal Work:

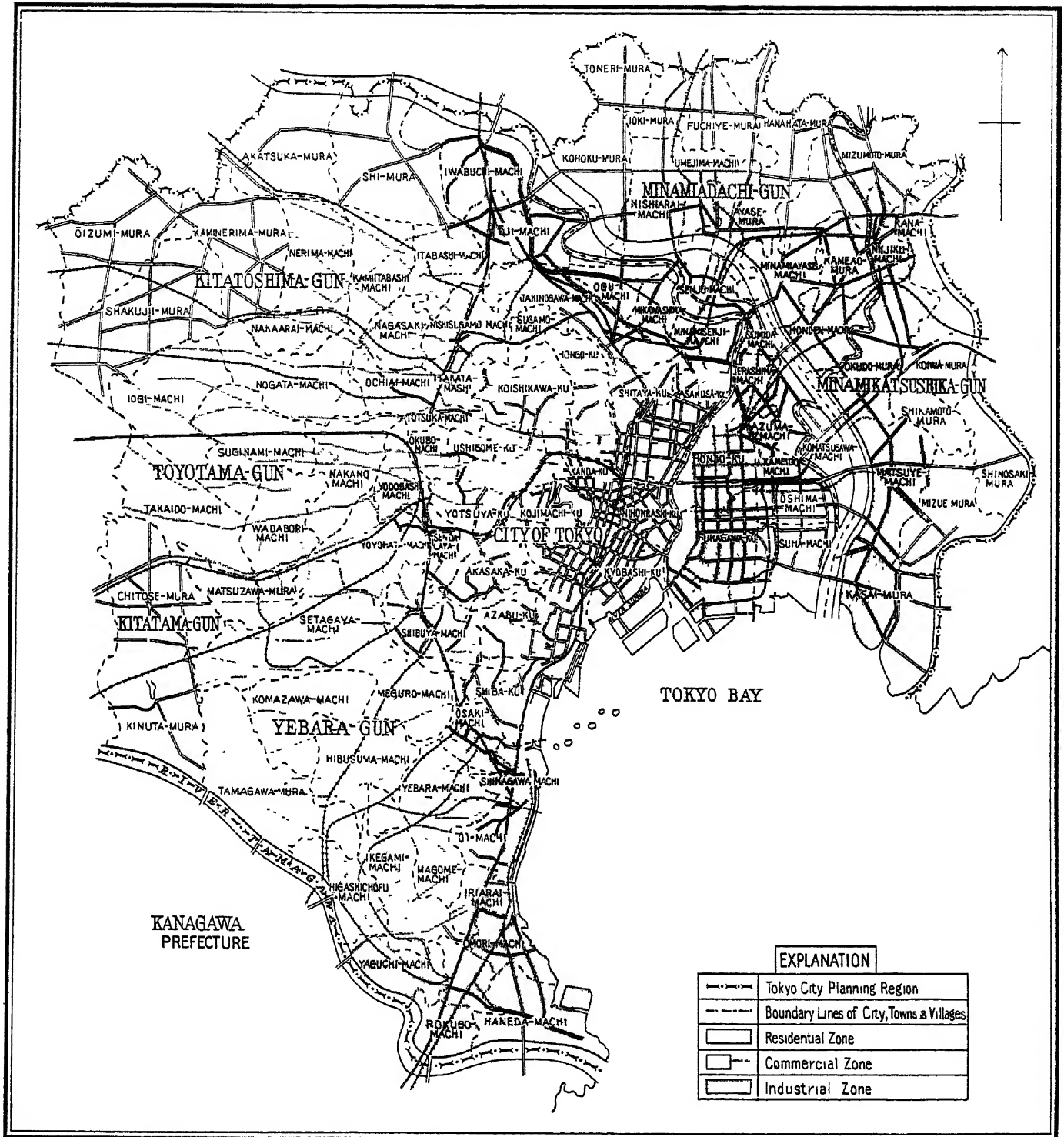
As soon as the method of removal was decided upon and consideration given to construction of buildings, area, distance, etc., the period in which the removal work was to be undertaken was decided upon. The period of removal work was divided into two parts, that which was expended in completing removal work on the existing site and time required to complete the reconstruction on the new exchange land. The period within which removal work was to be completed was determined beforehand under a regular schedule and was thus unified throughout the devastated area.

## 2. Processes of Removal

In carrying out the land readjustment policy, it was necessary to notify the occupants and household owners, as well as lease-owners and landowners beforehand, of their new exchange land, and then order removal. To do this, it was necessary either to make an actual investigation or refer to the State or Municipal and Prefectural Office files, to find out the proper individuals owning or controlling the different buildings and structures and order their removal. Such removal notices and orders were sent out for each removal group.

In case of buildings belonging to the State, Prefecture or the Municipality, which must be removed and which did not exactly come under the above removal instructions, removal was carried out by mutual agreement. Buildings which by reason of special circumstances, could not be moved under the regular removal instructions, were likewise included in the above category.

## ZONING SYSTEM OF TOKYO



### THE ZONING SYSTEM

The district system forms a fundamental factor in all municipal plans, and furnishes a basis of calculation in the management of cities. The district system within the Tokyo Municipal Zone was determined in January, 1925 for the city and 36 other towns and villages that come under the operation of the city house building law. Since then the suburbs have undergone considerable progress and expansion and the districts designated have had to be altered several times.

Further, the law of city house building designates a "beautification ward" and permits enforcement restrictions in the structure and equipment of buildings and the house sites within the district, necessary for purposes of beauty. The law of city planning has, on its part, the power especially to designate a limited area as a district for the maintenance of special scenery when deemed necessary. On the strength of this provision a region of natural beauty was designated in Tokyo in 1926 with Meiji Jingu (shrine) for its centre.



## LAND READJUSTMENT

In case removal by mutual agreement could not be conveniently carried out, the readjustment bureau officials undertook the job themselves.

### A. Removal Instructions:

After investigation of the buildings and structures and those connected with such buildings was completed, for the purpose of sending out removal instructions, it was necessary for the office of the removal group to notify the landowners and house-owners of the new exchange land. It was also necessary stipulate the period in which removal was to be carried out, allowing a grace of three months. Simultaneously it was also necessary to notify the lease-holders and tenants of their removal.

### B. Removal by Mutual Agreement:

In principle, ordinary buildings and other structures were to be moved by order. However, for those structures belonging to the State and the Municipality, it was more convenient, from a practical standpoint, to carry out removal by mutual agreement. In cases where individuals themselves preferred speedy removal, removal by methods other than instruction was followed. In such instances, permission was granted when it was revealed that the owners and those connected with the building were sincere in carrying out the removal. In such instances they were granted the same amount of compensation as in the case of removal by instruction. In the area in which removal by mutual agreement was allowed under the auspices of the City of Tokyo, there were 2,934 buildings, and structures numbering 2,690 and clearing away of 51 fixtures. Of the above figures, Stateowned buildings numbered 632, while State-owned structures aggregated 105. The reason why removal by mutual agreement was adopted for the above State-owned structures was due to convenience from a practical viewpoint. The rest belonged to ordinary individuals, but the mutual agreement plan was followed here because the individuals themselves preferred speedy removal.

### C. Direct Removal:

In case where removal by instruction or by mutual agreement could not be followed, the readjustment members themselves undertook the removal or had the buildings and structures dismantled. This method was followed for structures belonging to the State or other public institutions or for buildings of which the rightful ownership was doubtful, or when ownership could not be established.

However, before resorting to direct removal, it was necessary for the readjustment committee to notify owners or occupants of their intention



and later carry out their proposal. The work of removal was to be done under a regular contract system, and usually the work was done by a few workers under direction.

The number of direct removals undertaken in districts under the auspices of the City of Tokyo included 203 buildings, 109 structures, 14 cases of clearing away movable properties, two cases of removal of trees and one case of destruction of trees.

### 3. Compensation for Damage

Damage to buildings and structures caused in the course of removal to newly exchanged sites under the land readjustment plan was to be compensated for. The method of determining the amount of compensation to be paid for was based on the standard set by the reconstruction officials and was decided by the compensation investigation committee to which the matter was referred.

The categories in which compensation was to be paid included: allowance for building removal, construction removal, construction removal cost, fixture removal, losses sustained through suspension of business, and other miscellaneous expenses.

Besides, in regard to compensation further division as to payment to owners of buildings and structures and to occupants of such buildings was also made. Thus, in the case of owners, compensation was to be paid for the following items: building removal, construction removal and miscellaneous losses; in the case of occupants, the following were included: construction removal cost, fixture removal, losses sustained through suspension of business, etc. In case the owner and the occupant were one and the same person, he received compensation on all the above items.

As in the case of compensation paid for under the land readjustment system, so likewise compensation for removal was borne by the State and Municipality for undertakings within their respective jurisdictions.

1. Compensation for removal of buildings and structures within the area to be used for trunk roads and canals was to be borne by the State.
2. Compensation for removal of buildings and structures within the area to be used for auxiliary roads and small parks was to be borne by the Municipality.
3. In the case of trunk roads and canals, removal was recognized as such when the distance traversed by buildings or structures was more than five times the width of the new road or the readjusted road or canal. The same procedure was followed for removal of buildings caused by



## LAND READJUSTMENT

construction of auxiliary roads and small parks.

Thus, (a) within districts under jurisdiction of the Municipality, compensation for removal of buildings and structures was to be borne entirely by the Municipality except for those enterprises which were undertaken for trunk roads and canals. (b) Within districts under jurisdiction of the State, compensation for removal of buildings and structures was to be borne entirely by the State, except for those undertaken for auxiliary roads and small parks.

However, compensation for removal of buildings and structures at intersection of trunk and auxiliary roads was to be borne by those undertaking the trunk road reconstruction.

The amount of compensation paid within the readjustment area was as follows:

Readjustment body	No. of structures removed	Compensation sq. m. area sq. m.	Average sq. m. per buildings sq. m.	Amount of compensation yen	Av. amt. per building yen	Av. amt. per sq. m. yen
Department of Home Affairs...	42,004	2,594,975.83	61.78	36,618,605.78	871.76	46.65
City of Tokyo .....	162,478	9,246,555.36	56.92	114,615,127.43	705.42	40.98

### 4. Execution of Removal

Under the land readjusting system, owners as well as occupants of buildings and structures were given orders for removal. When instructions were given and promise was made that the removal would be carried, it was necessary for the readjustment officials to appoint someone to see that the removal was carried out according to projected plans and to give advice whenever needed. Besides, before actual work of removal was undertaken, it was necessary to see that all the preliminary arrangements for removal were completed. This included such matters as police rules regarding buildings and constructions, marketing places for Government monopoly goods, compulsory sale by auction, method and procedure followed in carrying out auctions and matters under temporary control and jurisdiction of the officials. These matters all had to be referred to competent officials and permission received for smooth and speedy carrying out of the removal. This included the modification of rules governing removal of buildings, speedy granting of permits, and the approval for removal of buildings from the Chief of the Metropolitan Police Board and other related official bodies. Besides, there was also the necessity of getting the proper authorities to exempt the fee for use of certain roads in carrying out the removal.

In executing removal, it was necessary in many cases during the process of the undertaking to order a temporary eviction of the occupants of buildings. However, in view of the fact that a large number of buildings were

to be moved all at the same time, there arose the question of how to accommodate all these occupants. For this purpose, the readjustment officials built temporary housing quarters in parks, within temple grounds, within playgrounds, on river embankments, and in open spaces to supply the needs of the occupants.

These temporary housing establishments were of three kinds: fixed residence, movable residence and movable houses. The fixed or stationary establishments were built to last for only a short period, while the movable houses could be set up or dismantled in the simplest fashion. Besides, one complete house could be easily transported on a single motor truck and set up on a road or in an open space as advisable. When the need was fulfilled in one place the hut could be taken down and transported to another spot where it was needed and set up again to be used and soon over again.

Besides the above arrangements, readjustment officials did many other things for the benefit of homeowners and occupants by giving suggestions and advice regarding removal when the order for such removal was issued, not to mention the numerous meetings and lectures held for the purpose of clarifying and outlining the methods to be followed in carrying out the readjustment. They also showed moving pictures of the best possible method in undertaking the removal, so as to harmonize and carry out the entire program without much difficulty. However, they received a large number of complaints from those not satisfied with the new exchange plots nor with the amount of compensation received, etc. On top of this, they had to listen to disputes between leaseholders and landowners, and face many other problems connected with the readjustment and reconstruction program.

In cases where the removal order was ignored, warnings were issued; and if the matter was still left unexecuted, the readjustment officials themselves carried out the removal.

In reviewing the salient points in the removal work executed by the City of Tokyo, it may be noted here that, starting with the removal of 12 buildings in the First and Second Removal groups in Zone No. 4 in July of 1925, and concluding with the removal of 8 buildings in the 111th Removal group in the Zone No. 57 in July of 1930, a total of 161,496 buildings and structures out of 161,515 establishments were removed, leaving only 19 buildings unmoved. Of the above number, 158,359 buildings (including those removed by proxy) were moved by instruction, while 2,934 cases were carried out under mutual agreement, and 203 constructions were removed directly.

Within districts under jurisdiction of the Department of Home Affairs, a total of 42,004 buildings and structures were removed. The start was made in February of 1924 with the removal of 5 buildings in Zone No. 6 and completed in July of 1930 with the removal of 3 buildings in Zone No. 31. Of

the above total, removal instruction (including removal by proxy) numbered 40,995 structures, while mutually agreed removals numbered 1,009.

### 5. Reclamation of Residential Lands

In case the designated exchanged land under the land readjusting system was not fit for building purposes, because one part was covered with water or because the surface was too uneven, special readjustment work was done to make the land suitable for the above purpose. This included such work as filling in of earth, making retaining walls and temporary construction of sewerage system, so as to permit removal of buildings. The above readjustment was called reconstruction work for making or reclaiming of residential lands.

Although readjustment officials had decided on undertaking the building up of residential land under the land readjusting system, they were still unsettled as to method and sphere of their proposed project. Thus, with the speedy commencement of the work of removal of buildings, many different methods of residential building ground were enforced, taking into consideration the different conditions in the different districts. As a result of the above conditions, each branch of the readjustment bureau had different methods of reclaiming residential lands; and this led to all kinds of difficulties later on. Finally, a conference was held by the Reconstruction Bureau officials and others connected with the work and it was decided to carry out the reclamation of residential land in the following way:

Matters decided at conference regarding residential land reclamation

1. In cases where the land designated for residential land was not suitable for building purposes because of too uneven surface:

- (a) That part of the land necessary for actual building purposes was to be made even.
- (b) Other parts of the land, other than the above ground, the value (the index) of the land was to be considered. However, in cases where the above decisions could not be applied, there was to be a further conference on the matter.

2. In cases where the landowner or the lease-holder had filled in the land or had built a retaining stone wall:

- (a) Removal or dismantling was not to be enforced because the cost of construction work for filling in the land or building up of the necessary stone walls was included in the value of the land.
- (b) For stone walls which were considered as overreaching the bounds of

## THE RECONSTRUCTION OF TOKYO

retaining walls and other such structures, removal orders or dismantling orders were to be issued.

3. In cases where the land-owner or the lease-holder had filled in the residential land which formerly was of the same level as the average sea level, or a ground which was lower than the surrounding area, and had received a low substitute land, filling in to the same former height was allowed. However, in the case of districts under the control of No. 4 branch office, the following plan was adopted:

- (a) For Lands which were filled in before readjustment to the height of more than 1.82 metres above the average sea level, the substitute land was also to be filled in to the same height of 1.82 metres.
- (b) For area which, before readjustment, was filled in to a height less than 1.82 metres above the average sea level, the exchange land was to be filled in to the same height as before. (the average sea level of 1.82 metres was to be based on the standard at Reiganjima)

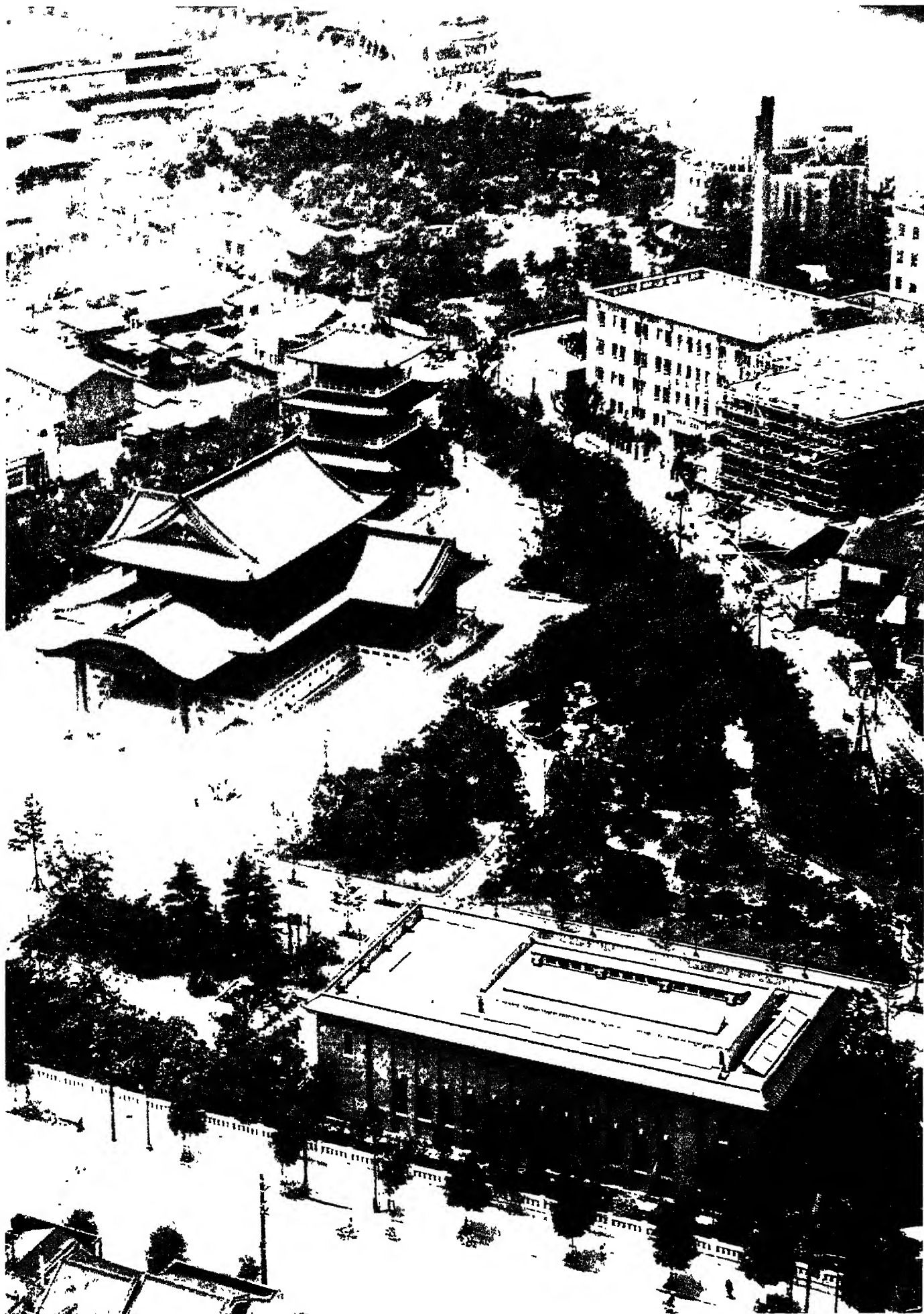
4. In case, the residential land was made uneven by the construction of new roads, the land surface was not to be made even, as a principle, either by excavating or filling in. However, when excavating or filling in was especially needed, construction work was to be undertaken after agreement was reached regarding actual condition.

5. In cases where the residential land was lower than the foundation of the bridge:

- (a) When the bottom of the bridge was of the same level as the road, the matter was to be handled under Decision 4.
- (b) When the bottom of the bridge was higher than the road, the filling in of the residential land was to be effected to the same height as the difference between the bottom of the bridge and the road surface (that is the height of the bridge girder). The distance to which such filling in was to be allowed was 9.09 metres from the road. However, in case the building was more than 9.09 metres deep, the filling in was to be undertaken for the exact space required for such buildings.

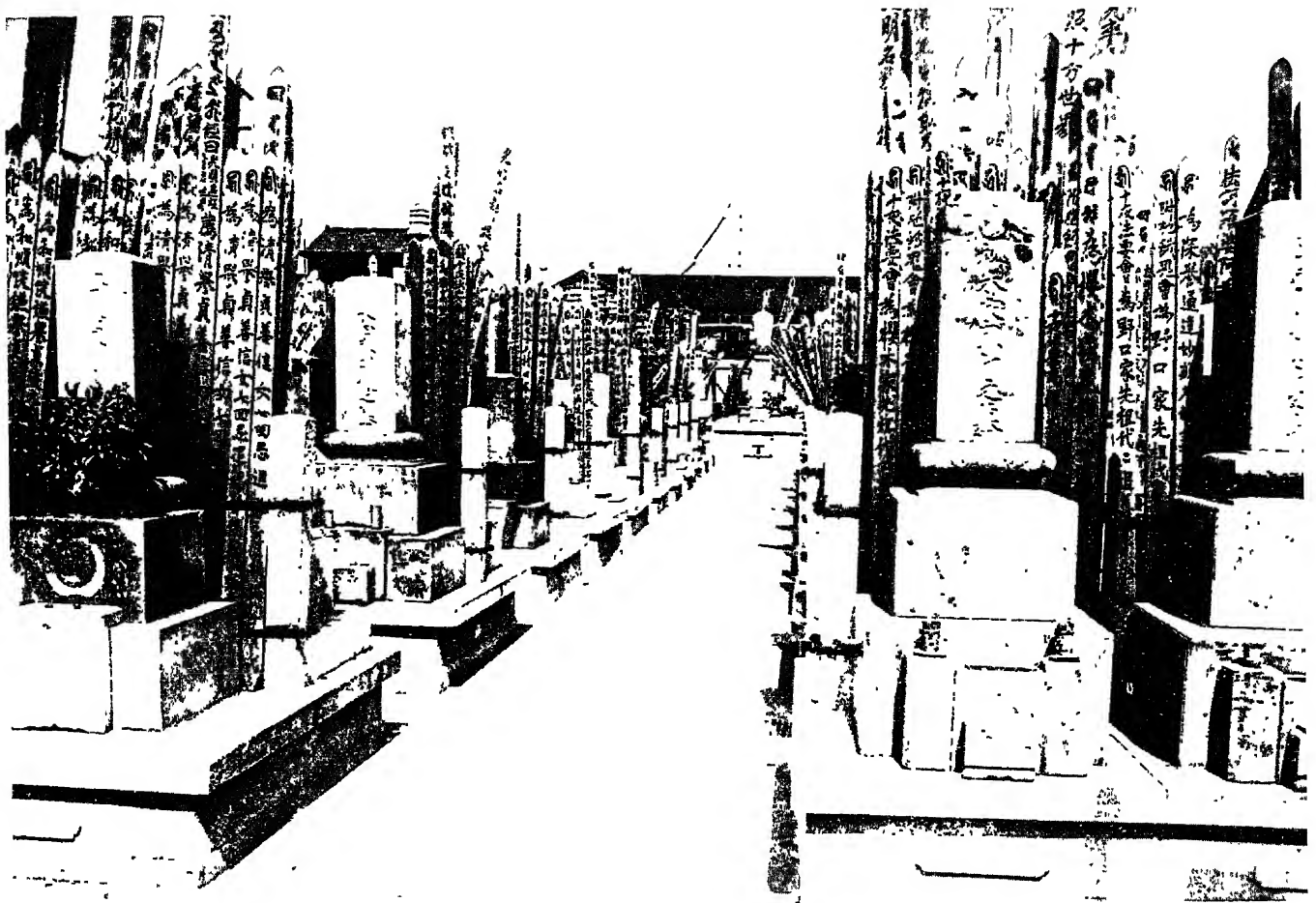
## 6. Removal of Cemeteries

The number of tombs which had to be removed under the land readjustment system totalled more than 97,900; and since all these could not be accommodated in the regular cemeteries, there arose the necessity of designat-



Earthquake Memorial Hall and its neighbor, Honjo ward





A cemetery, created after the Earthquake, in Tokyo



Tama Cemetery, its main entrance.

ing new places and ordering removal. However, those graves which needed reinterment came under the Prefectural and Municipal regulations, and as such they came within the land readjustment system and had to be transferred to the suburbs or taken care of in charnel-houses.

However, in trying to follow the above regulations, there arose serious opposition from suburban people against the removal of cemeteries to the suburbs, while there was also the difficulty of erecting new charnel-houses because of too great expense at that time. Besides, the temples and shrines were likewise too poor to allow for any expansion in their burial grounds. As a result of the above considerations, the regulations regarding cemeteries and reinterment were greatly modified in order to carry out the undertaking. This required many conferences between the readjustment officials and authorities of Tokyo Prefecture and the Metropolitan Police Board. The form in which reinterment was to be carried out was finally settled. It was decided to create special cemeteries, simple charnel-houses in newly designated places and thus order their removal.

Reinterments carried out under auspices of the City of Tokyo made necessary a total of 343 public cemeteries within temple compounds, and 111 private cemeteries, reached 454 in all. The total area of the above cemeteries was 314,090.44 square metres, while the number of tombs reached 147,507.

Of the above cemeteries, the area used for residential lands or for public uses after readjustment totalled 146,446.47 square metres, and the tombs moved therefrom numbered 82,080.

The reinterment area carried out under the auspices of the Department of Home Affairs covered 31,160.33 square metres, and the number of tombs totalled 15,851.

The total amount of compensation paid for removal was 1,669,445.07 yen, of which 418,305.16 yen was borne by the State. The amount paid by the Municipality was 1,251,139.91 yen. The above amounts were all paid for by the end of 1929.

The total number of graves removed within the district under jurisdiction of the Department of Home Affairs was 15,851, with compensation totalling 315,707.34 yen. Of the above amount, that borne by the State reached 276,527.55 yen, while that borne by the Municipality was 39,179.79 yen.

## 7. Control of Temporary Buildings

The reconstruction buildings following the Great Earthquake was extremely rapid. Before the ashes of the disaster had hardly cooled, construction of barracks or temporary buildings was started in various parts of the devastated area. While public sentiment regarding construction of permanent

buildings was gradually taking form, the Government issued an Imperial Ordinance No. 414, on September of 1926, greatly modifying the regular building regulations in view of the untold losses sustained by the citizens in the great earthquake, and the financial difficulties in which the citizens were placed. The Imperial Ordinance was to be specially applied in the devastated areas within Tokyo and Kanagawa Prefectures. As a result of the above order, practically almost none of the strict regulations were to be applied in the construction of temporary buildings.

However, the regular building regulations were not entirely abolished in the rebuilt area, for the reconstruction officials had the following idea in mind. Should the citizens regain their former financial status the regular rules were to be again enforced, so that building would come under one uniform rule.

Thus was enforced the regulation that work of reconstruction was to be commenced by the end of August of 1924 (limit for commencement of construction) and finished by the end of August, 1928 (time limit for dismantling the building), and that building was to be limited to two storeys.

Moreover, in the carrying out the land readjustment system, there arose the question of how to treat removal of temporary buildings to designated exchange sites. Under the original land readjusting system, construction of temporary buildings within the devastated area had to be started by the end of August, 1924, but in view of the slow progress of reconstruction, changes likewise were made in the regulations regarding construction of temporary buildings, as to date of transfer of exchange land and permission for such exchanges.

Again in March of 1927, another Imperial Ordinance was issued for further prolonging the period of temporary building construction.

- A. Theatres, auditoriums, hotels, factories and special kinds of buildings, for five years.
- B. Buildings within class "A" fire prevention zones, for ten years.

For special construction which did not exactly come within the above two classes, permission was to be received from the administrative officials lengthening the time in which the building could be left as it was, indefinitely. When permission was obtained for such buildings that have no special construction, the time limit was extended five years. At the same time, if steps were taken with the officials far above buildings to repair the present temporary buildings, they could be used indefinitely, with the approval of the administrative authorities.

In this way, the readjustment officials considered the financial condition of the citizens by prolonging the period in which temporary buildings were to be taken down and in modifying the building rules of the city. Thus, they were able to carry out the unification of temporary buildings and structures.



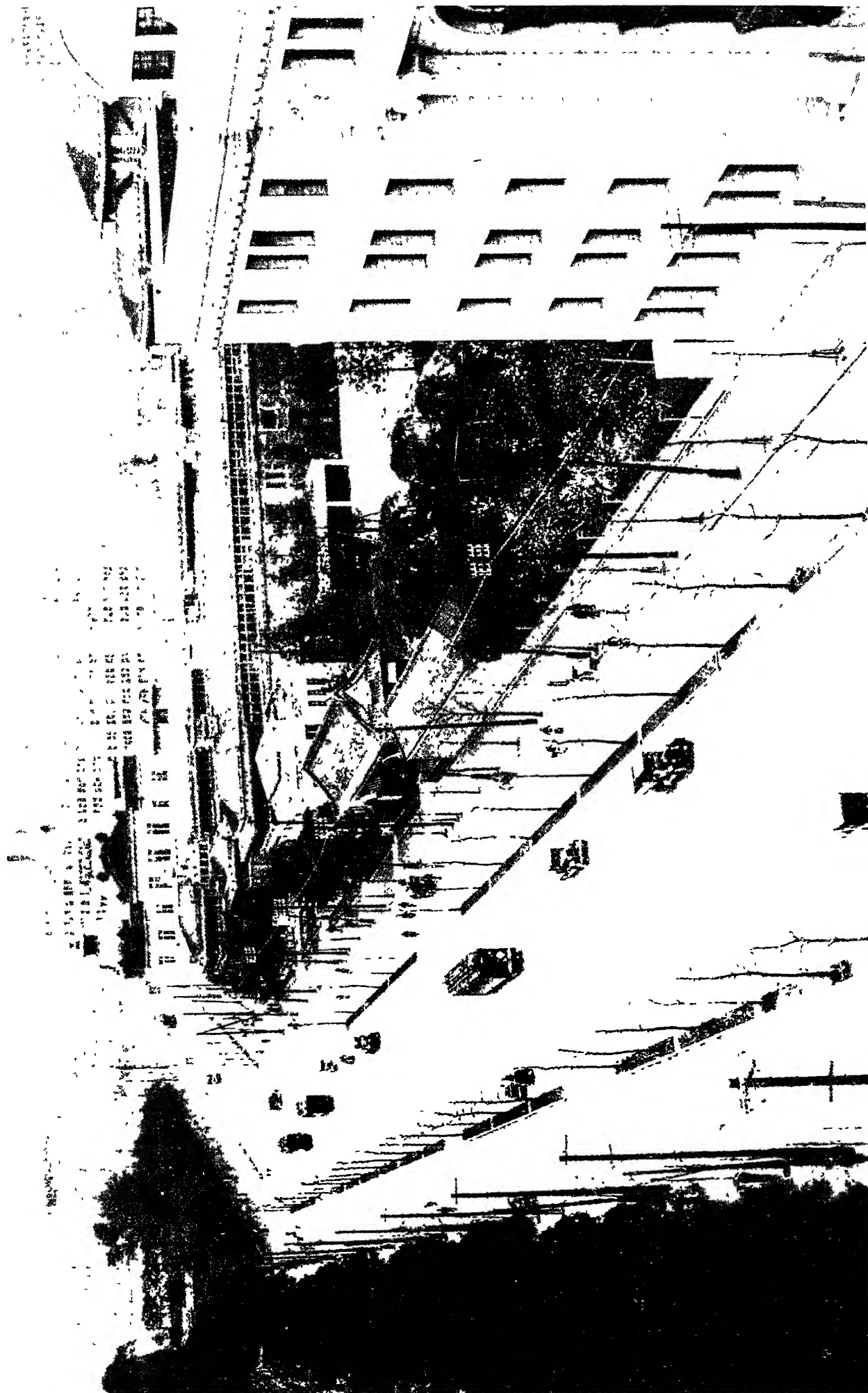


A road to Meiji Shrine

## ROADS

The roads of Tokyo before the earthquake were mostly relics of Yedo days. The roads plan of Yedo days was drawn mainly with the idea of being prepared for street fighting, and was full of bends and windings with the Yedo castle (the present Imperial Palace Precincts) for the centre. In consequence, the streets of Tokyo abounded too much in inflexions and crookedness at the cost of systematization. Besides, they were generally narrow, and become fearfully muddy in the rain; so they were exceedingly unsatisfactory as thoroughfares of a great metropolis. The City of Tokyo had long since taken the matter into consideration, and been making efforts to effect improvement of roads and streets from as far back as 1880. Roads that offered free traffic for automobiles were yet very few in number, innumerable narrow pathways running between them, that could not but occasion great concern from the point of view of maintaining peace, health and sanitation and safe traffic.

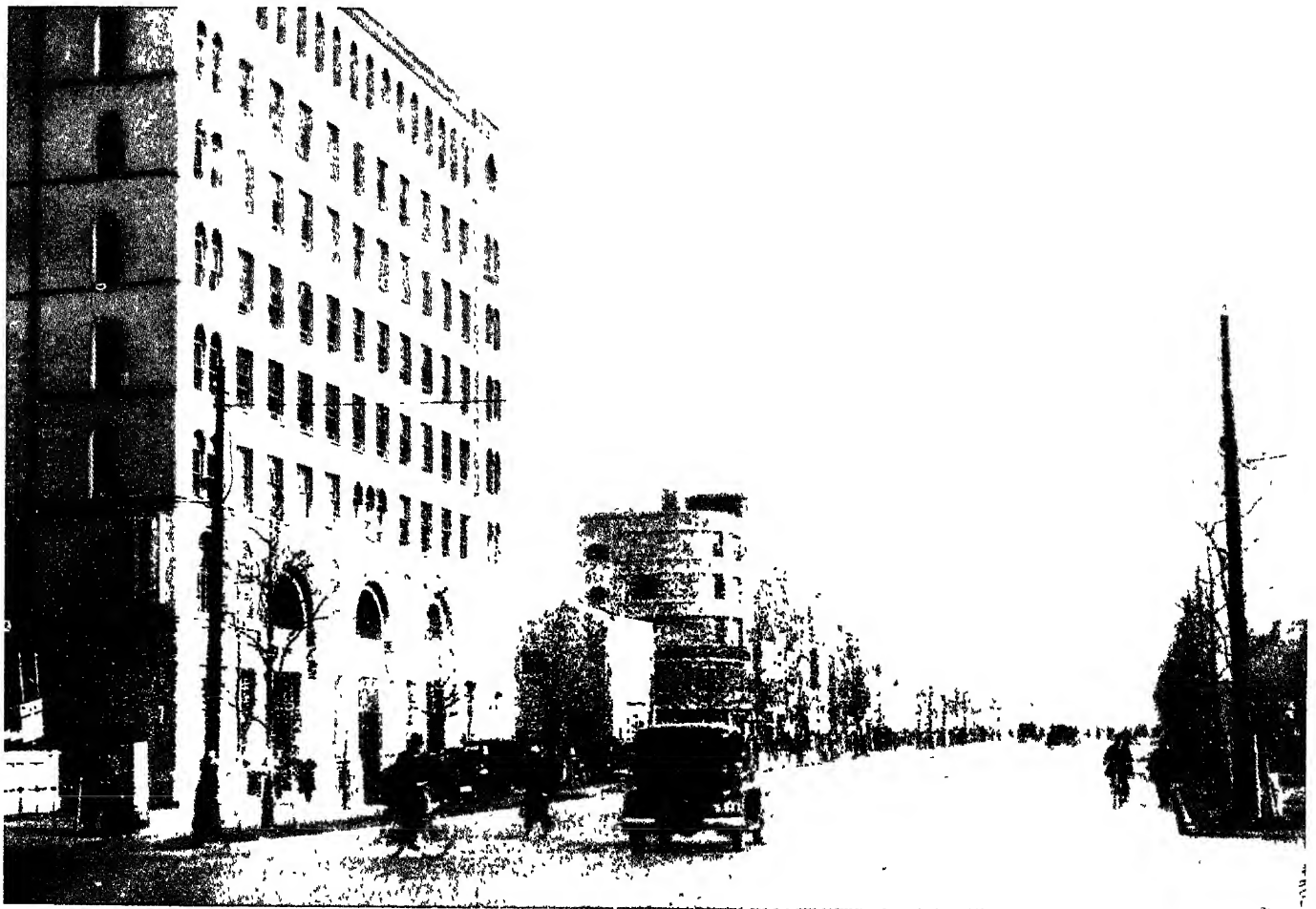
A revolutionary improvement of roads and streets was a matter of absolute necessity. But improvement could not be forced drastically on busy business centres all at once, owing to old usages and individual economic considerations. But the great earthquake did its part in burning down more than a half of the busiest centre in downtown Tokyo, and unexpectedly gave the people an opportunity to carry out their long-standing desire thoroughly to improve the roads and streets by reconstructing and widening them.



Hibiya Road and a distant view of "Marunouchi" districts



View of "Ueno Hirokoji" from the main entrance of Ueno Park, Shitaya ward



Yaesu Road, Kojimachi ward



"Showa" road, the best specimen of the Reconstruction Road

## CHAPTER II

### Roads

The total area of streets within the City of Tokyo prior to the earthquake of 1923, was 9,283,867.76 square metres which is about 11.6 percent of the total area of the city. In contrast with large cities in countries of Europe and America the above figure hardly bears comparison. Thus, the question of road construction and improvement was an exceedingly important problem. With the destruction of the city by the earthquake, the citizens were given an opportunity to carry out the reconstruction of the city streets on a wide scale for which they had been hoping a long time. Therefore, as one of the important undertakings in the Capital Reconstruction Plan, the citizens were able to formulate a new plan for rebuilding streets in the devastated area and also in the adjacent districts.

Besides, the fundamental plan of the land readjusting system could not be determined until after the drafting of the city road lines. Thus, in the following plan for road building under the reconstruction program, division was made into three parts, namely; roads under the land readjusting system, trunk roads and auxiliary roads. Under the above plan, the department of Home Affairs, through the Minister of Home Affairs, was to repair or construct new roads within the districts under jurisdiction of the Home Department, and also 52 trunk lines. The City of Tokyo through the Mayor was to undertake construction of new lines and reconstruction of old lines within the district under the management of the city, as well as 122 auxiliary lines.

Before the above road reconstruction plans were undertaken, the total length of roads measuring about 8.90 metres in width was 1,011,358 metres, with an area of 9,283,868 square metres. This figure is only 11.6 percent of the total area of the City of Tokyo, which is 79,889,166 square metres. After the reconstruction plans were carried out, the length of the roads was extended 136,207 metres to the above total, with an increase in area of 4,268,065 square metres. Compared with the total area of the City of Tokyo, the new figure approximates 18 percent.



## THE RECONSTRUCTION OF TOKYO

By Different Sections	Before Reconstruction			After Reconstruction		
	Average width	Length	Area	Average width	Length	Area
In area where reconstruction plans were carried out.....	<i>m.</i> 9.7	<i>m.</i> 606,100	<i>sq. m.</i> 5,873,259	<i>m.</i> 13.7	<i>m.</i> 729,029	<i>sq. m.</i> 9,992,058
Outside area where reconstruction plans were carried out .....	8.4	405,150	3,410,608	8.5	418,528	3,559,874
Total .. ,.....	8.9	1,011,350	9,283,867	11.1	1,147,557	13,551,932

Along with the above plan of reconstructing the streets of Tokyo, another plan to repair and improve the surface of the roads damaged by the earthquake was undertaken, thus renovating the roads in the Capital.

The following sections will describe the important points in the road reconstruction plan.

### SECTION I

#### MAIN TRUNK AND AUXILIARY ROADS

The trunk roads which were to be constructed by the Department of Home Affairs at an estimated cost of 257,458,400 yen, numbered 52, measuring 115,816 metres in length and 3,261,927 square metres in area. These roads measured 22 metres or more in width.

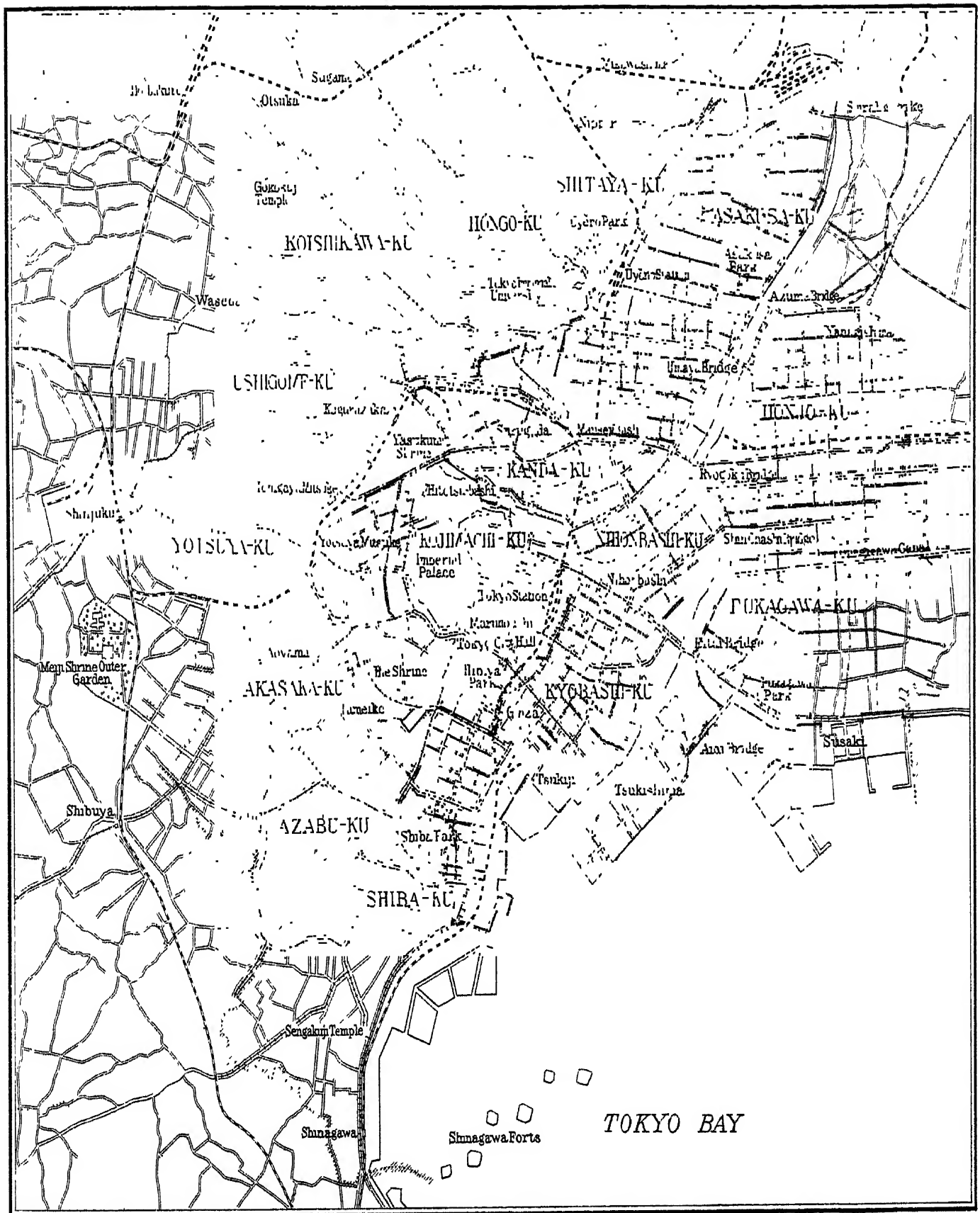
Under the City of Tokyo was to be carried out the construction of auxiliary roads numbering 122, totalling 124,159 metres in length and 1,747,147 square metres in area. The width of these roads was to be from 11 to 22 metres. The estimated cost of the entire undertaking was 10,949,115 yen, which was to be budgeted out of road improving fund which belonged to the continuous city roads improvement and construction fund and from the land readjustment fund. The work was to be undertaken under an eight-year continuous plan from 1923 to 1930. If, at the end of the above period, there should be any work left over, it was to be completed under the city construction plan in the following year of 1931, within the original budget estimates.

### SECTION II

#### ROADS UNDER LAND READJUSTMENT SYSTEM

Roads coming under the land readjustment system were those newly constructed or repaired, connecting the trunk roads or the auxiliary roads, within

## ROADS



EXPLANATION:

### Main Trunk Roads

### Auxiliary Roads

### Section of Street Plants

The Road planned but not carried out

**The Road planned but not carried out**

**Burnt Area**





## ROADS

the districts in which the above system had been carried out. These roads ran both parallel with and at right angles to the main or auxiliary roads, and were undertaken either under order of the Department of Home Affairs or the City of Tokyo. As a general principle the width of these roads varied from 3 metres to 11 metres, but in some cases roads as wide as 11 to 27 metres were allowed. The total length of newly constructed roads measured 286,586 metres, and the repaired roads 317,805 metres.

### SECTION III

#### PAVEMENT OF ROADS

Taking advantage of the 3,000,000 yen granted by His Majesty the Emperor out of the Privy Purse in 1920 to be specially used for paving streets within the Capital, the city formulated a seven-year continuous plan to pave 94,545.45 metres, of important streets, aggregating 1,150,413.22 square metres in area. The estimated amount of the undertaking was 39,468,000 yen and work was to be started from 1921.

While the construction work was under way, the Great Earthquake of 1923 occurred and the undertaking was suspended. The program of paving the streets within the devastated area was transferred to the Reconstruction Program, while the other plans were to be carried out under a separate budget. Under the Reconstruction Program, an estimate of 1,032,377 yen was approved to carry out the reconstruction of paved streets approximating 77,685.95 square metres in area, which were damaged by the Great Earthquake, and the repavement of 40,128.92 square metres of important streets, and 7,818.18 metres, of streets bordering the tramway lines. The above reconstruction work was to have been undertaken in four years continuously from the fiscal year of 1923 to the fiscal year of 1926 inclusive.

Plans for paving 49,656.36 metres of auxiliary streets, approximating 462,687.60 square metres in area, a separate budget of 1,009,778 yen were formulated, while for paving streets under the land readjusting system, measuring 4,561.81 metres in length, totalling 41,071.07 square metres in area, another budget of 86,563 yen was drawn up. The above two plans were to have been carried out under a continuous program to the fiscal year of 1930. Should there be still any part of the program unfinished by that time, it was to have been completed by the fiscal year of 1931 within the original estimates.

# CHAPTER III

## Bridges

The reconstruction program of bridges in the City of Tokyo can be divided into two parts: first, bridges belonging to the Special City Planning; and secondly, bridges coming under the City Reconstruction Program. The former is carried out under auspices of the Department of Home Affairs and the City of Tokyo, while the latter plan is carried out by the City of Tokyo alone as part of the Reconstruction Program.

The following sections will give details of the important points of the undertaking carried out in this enterprise.

### SECTION I

#### BRIDGES UNDER RECONSTRUCTION PLAN

The construction of all the bridges under the Capital Reconstruction Program was started in August of 1924 and was successfully completed as planned in 1929. These included all the bridges built or rebuilt under the Reconstruction Program, including those connected with roads and rivers, under the reconstruction program, and bridges undertaken under the land readjustment system.

The following describes the details of various bridge undertakings:

Bridges carried out under auspices of the Department of Home Affairs:

Expenditure for 96 bridges connected with trunk roads . . . ¥32,272,000

Expenditure for 15 bridges connected with river and canal  
improvement . . . . . 2,046,000

Expenditure for one bridge connected with the land read-  
ing system . . . . . 29,000

Bridges undertaken under auspices of the City of Tokyo:

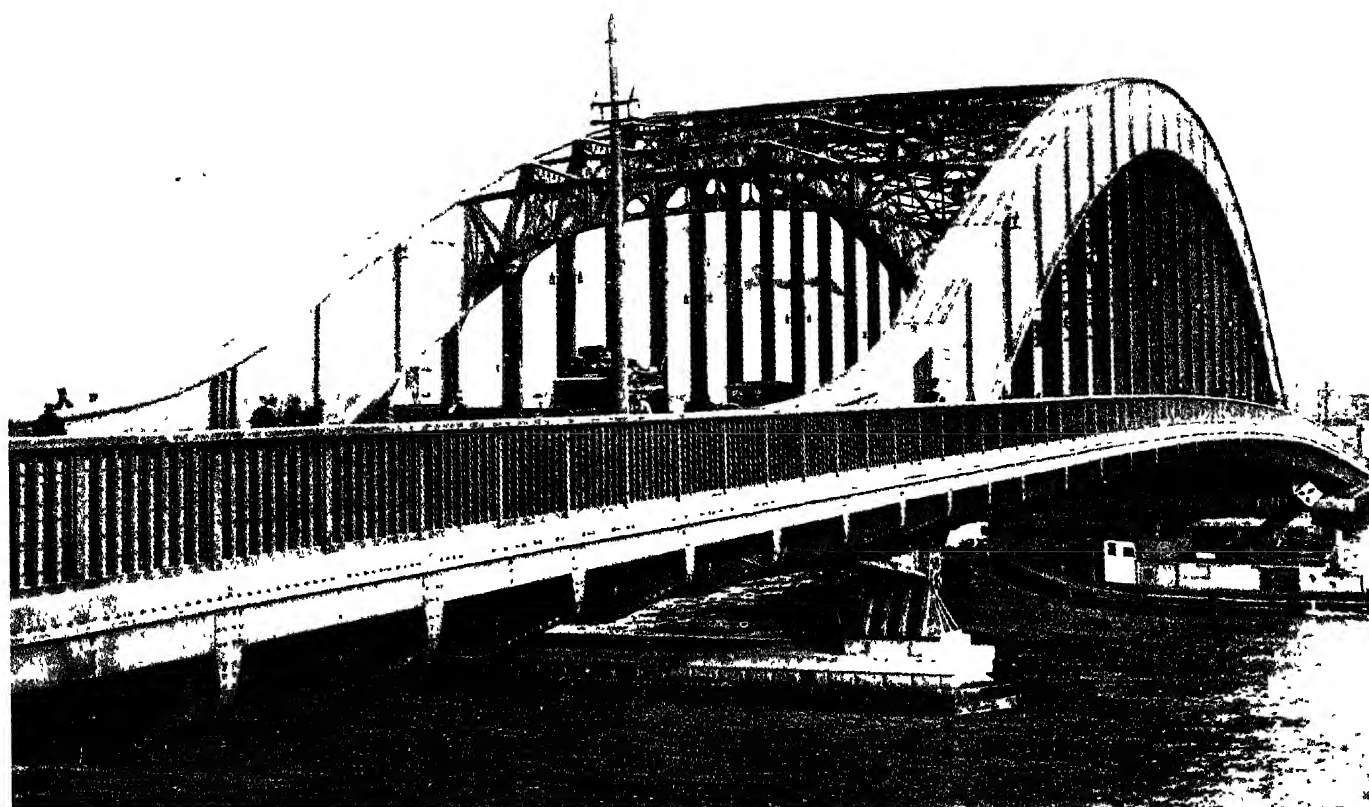
Expenditure for 129 bridges connected with auxiliary roads . . 12,747,020

Expenditure for 57 bridges connected with the plan of pav-  
ing roads under the land readjusting system . . . . . 1,775,726

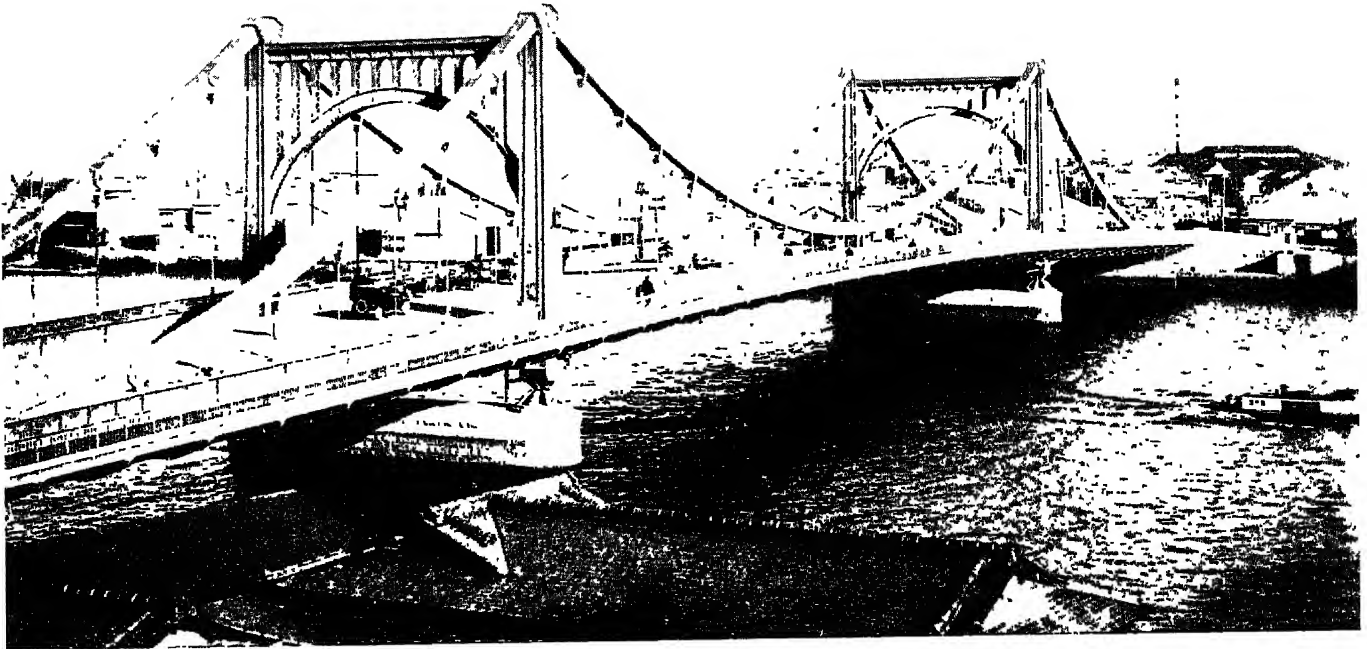
The above plans, as a matter of fact, were started in the fiscal year of 1923 and were to have been completed under an eight-year continuous policy by the fiscal year of 1930.



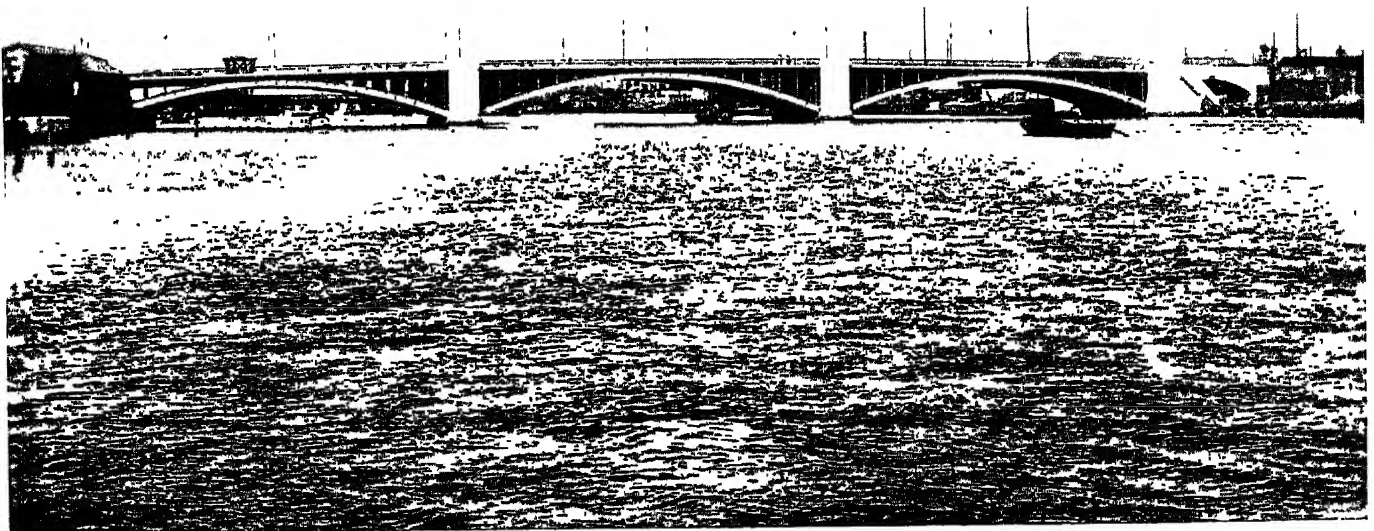
Eitai-bashi Bridge, burnt in the earthquake and fire



The same bridge reconstructed



Kiyosu-bashi Bridge, one of the six great bridges

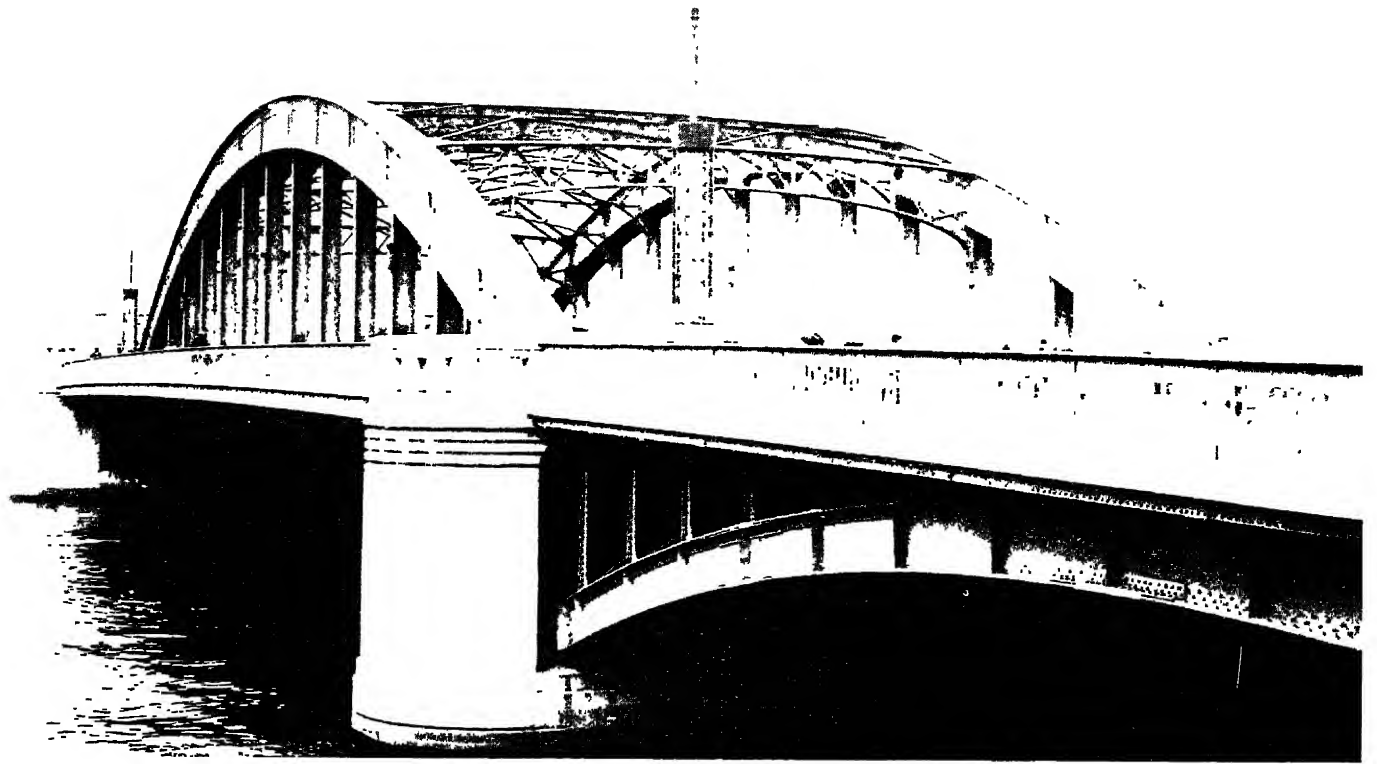


Kuramae-bashi Bridge, one of the six great bridges

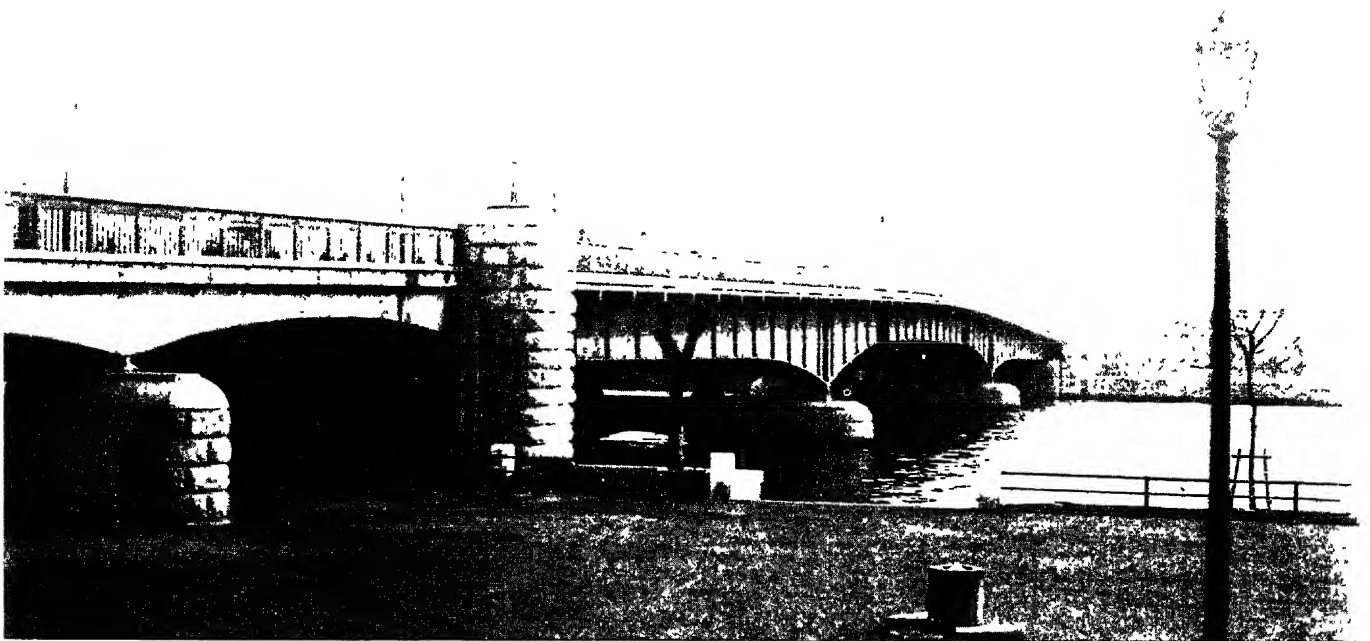
#### BRIDGES

The bridges in the city were, before the earthquake, mostly built of wood. In the earthquake conflagration these bridges caught fire and were burnt down, cutting off the way of fleeing refugees. Indeed, the burning down of bridges was responsible for the loss of no small number of lives. In carrying out the work of reconstruction, this bitter experience was not lost sight of and the greatest caution has been exercised in amending this fault of the old bridges. In the construction of bridges the greatest care was taken to use the latest advances made in the art and science of bridge architecture, at the same time special attention was paid to make them earthquake-proof. Furthermore the number of bridges has been increased to ensure and promote facility and safety of communication

The total number of street bridges built in Tokyo as a part of reconstruction work is 298. It is unprecedented in the world of practical engineering that so many bridges should be constructed or reconstructed all at once in a great metro-



**Komagata-bashi Bridge, one of the six great bridges**



**Kototoi-bashi Bridge, one of the six great bridges**

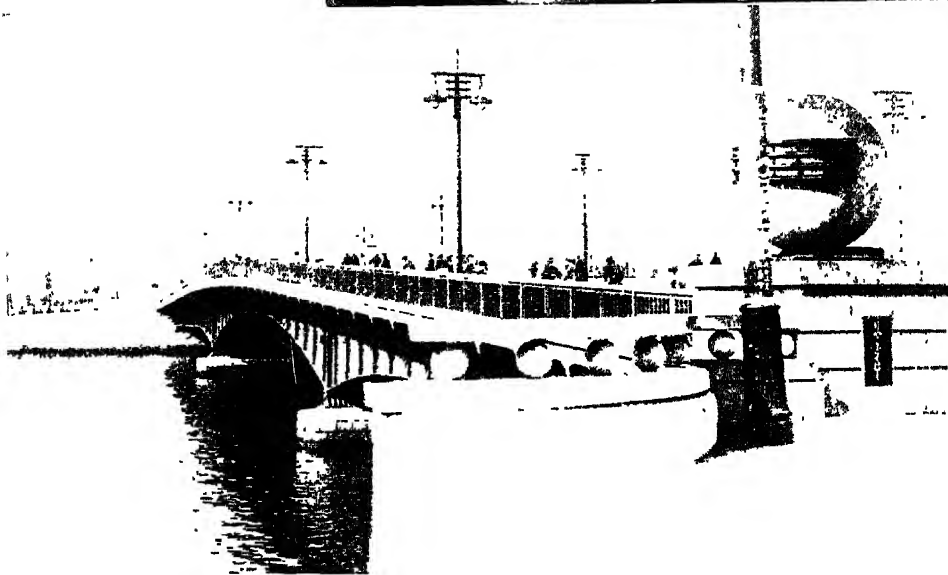
polis. Of these bridges the most interesting are the six great structures that span the river Sumida, which flows through the capital and offers great water facilities to the commercial and industrial activities of the city, is about 600 feet wide near Eitai-bashi (bashi=bridge) and about 500 feet wide in the upper course near Kotobuki-bashi. Altogether nine bridges are to be thrown across it, as part of the reconstruction work, at a total expenditure of 16,945,000 yen. It is to be especially noted that the work of constructing these bridges was all on a great scale, and was carried out with wonderfully exhaustive care as well as remarkable swiftness.

The Sumida bridges are a grand sight in the Imperial capital; and, as they form objects of great interest in all respects, the fullest inquiries and investigations were made in determining and executing their designs. Leaving nothing used in modern engineering and the latest scientific art, the work commenced in 1924 was completed in four years, in 1927.

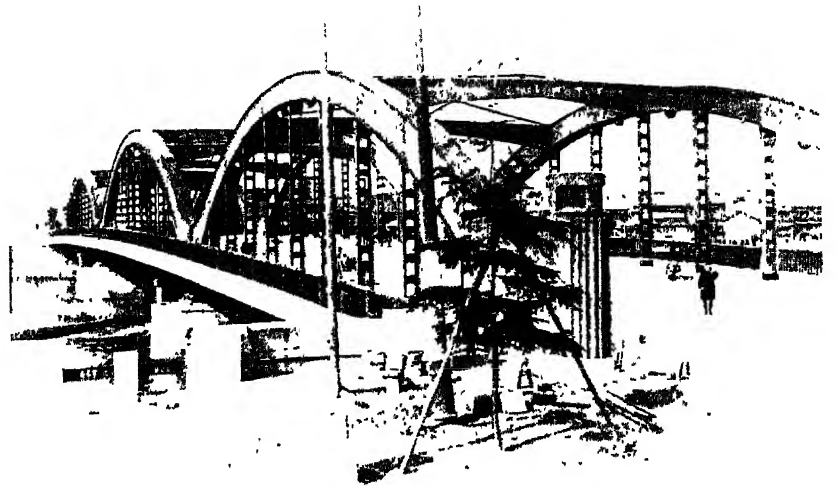




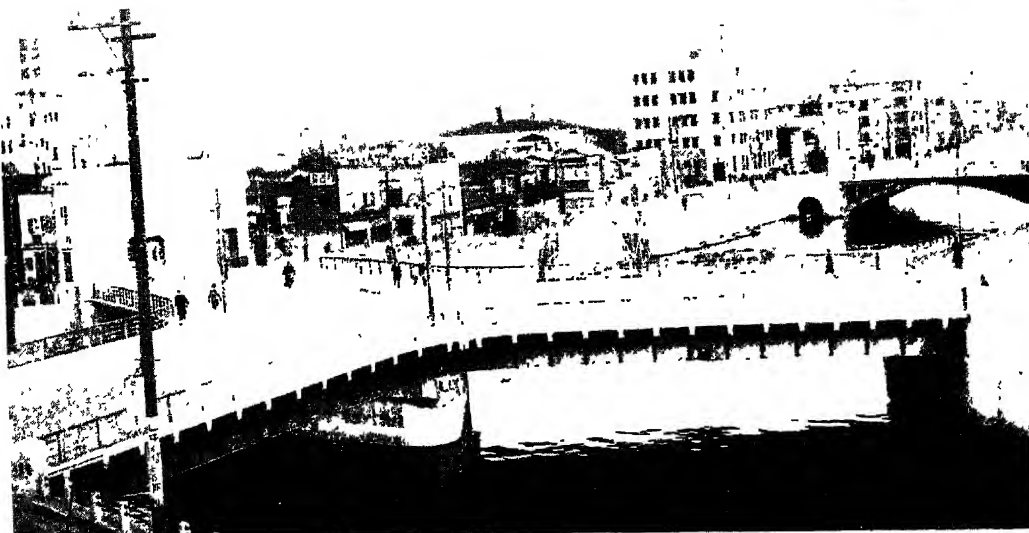
Hijiri-bashi Bridge



Ryogoku-bashi Bridge



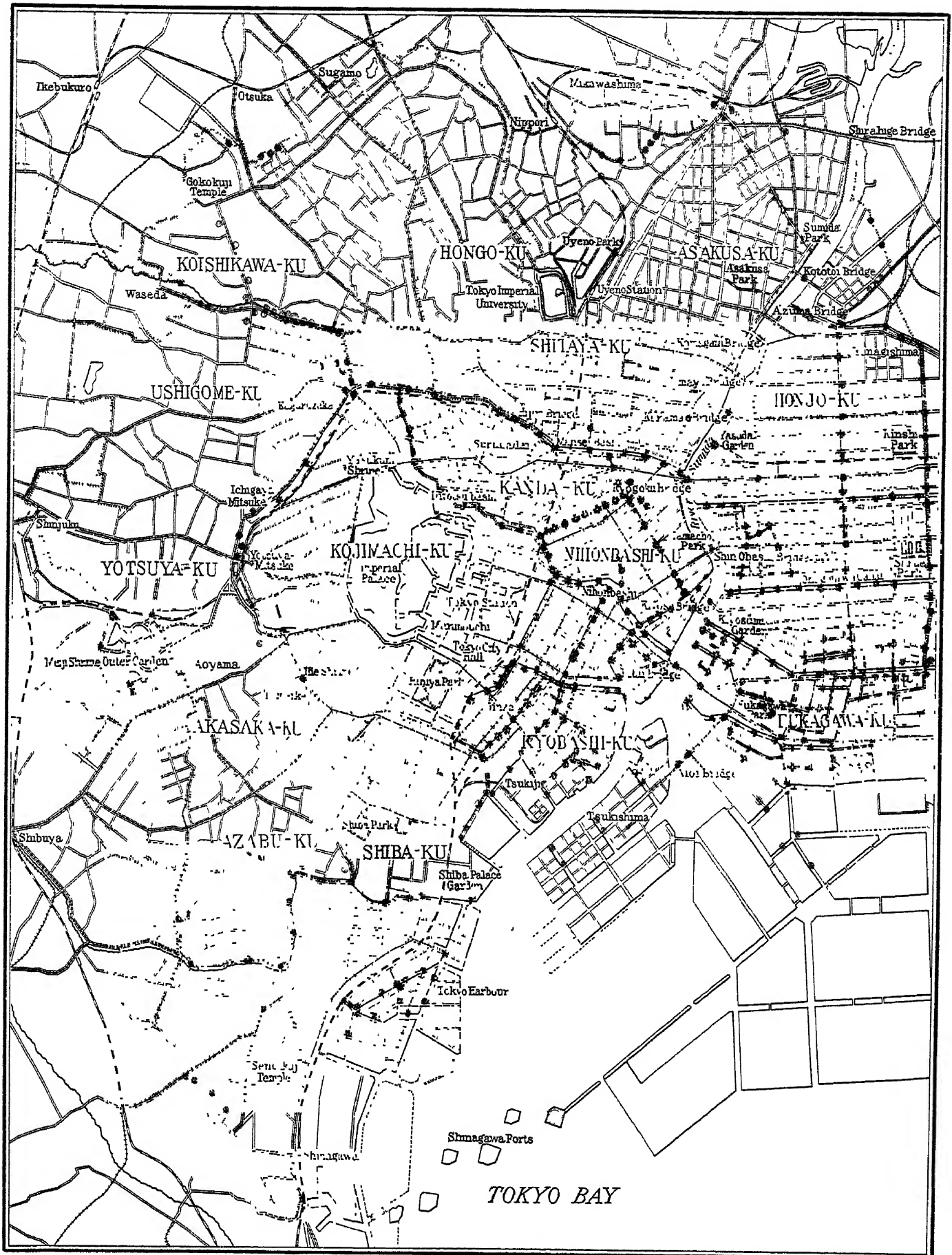
Umayabashi Bridge



Miyoshi-bashi Bridge

Various features of the Reconstruction Bridge

# BRIDGES IN TOKYO



EXPLANATION:

### Bridges Constructed by the Bureau of Reconstruction

© Bridges Constructed by the Municipality of Tokyo

• Old Bridges





## BRIDGES

### SECTION II

#### RECONSTRUCTION AND IMPROVEMENT OF OTHER BRIDGES

Besides the bridges which were to have been undertaken under the two plans mentioned above, there were 359 other bridges which needed repairs in the City of Tokyo. These included the 289 bridges completely destroyed by the earthquake and 70 others which were partially destroyed.

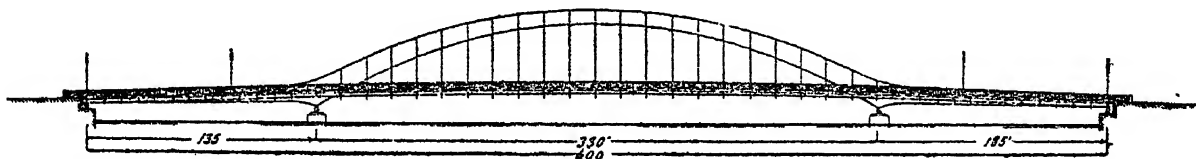
As an emergency undertaking, temporary wooden bridges were constructed to take the place of those completely destroyed.

A reconstruction budget of 1,020,009 yen was drawn up to repair the 164 bridges under a three-year continuous plan from the fiscal year of 1923.

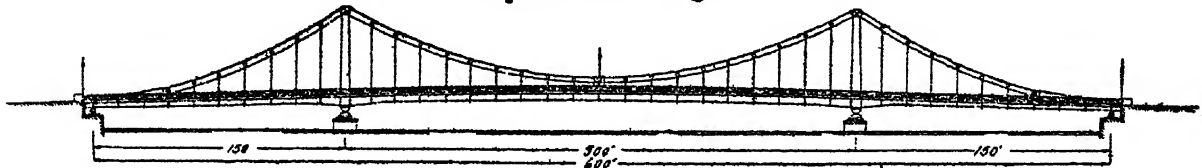
Besides, in regard to 88 bridges which were so damaged that permanent use in future was questioned, and those bridges which were of inflammable nature and those which were not of sufficient strength, a different plan to repair these was evolved. For the above purpose a sum of 8,688,575 yen was taken out of the budget of 10,464,301 yen. The undertaking was to have been completed under a seven-year continuous plan from the fiscal year of 1923 to the fiscal year of 1929. However, in view of the actual work of construction, the program was prolonged two more years and was completed in 1931.

#### Design of Bridges over Sumida River

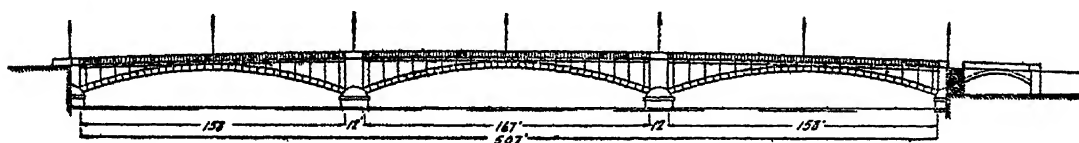
Eitai-bashi Bridge



Kiyosu-bashi Bridge



Kuramae-bashi Bridge



# CHAPTER IV

## Rivers and Canals

The number of rivers and canals in the City of Tokyo, including the Sumida River, which could be used for water transportation purposes, totalled 67, measuring more than 86.40 kilometres in length, with a total area of 4,297,520.65 square metres. However, most of these water routes were narrow and bridges constructed over them were extremely low. Consequently in case of low tides, the boatmen experienced difficulty in navigating the waters because of shallowness, while in case of high tides, the bridges were too low to permit easy transportation of vessels. Besides, the foundation of the banks was too shallow to allow sufficient dredging. Thus most of the rivers required fundamental improvements.

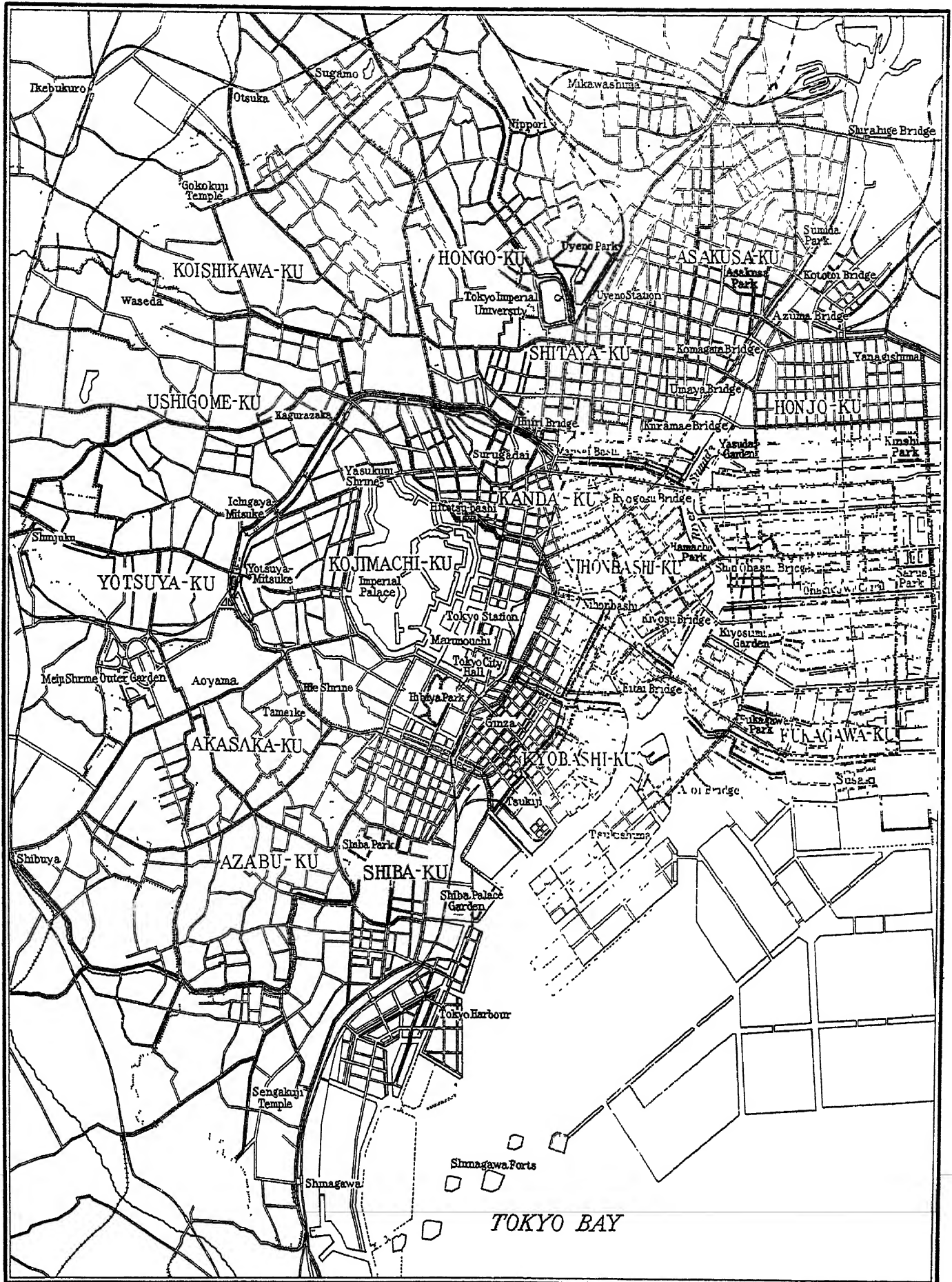
Under the Reconstruction Program carried out by the Department of Home Affairs, which called for improvement to canals, and digging and filling in new and old canals, 11 canals measuring 14,590 metres were to be improved, with an average width of 40 metres. The average depth of the canals was 1.8 metres. Besides, one other canal measuring 290 metres, with an average width of 33 metres and a depth of 1.8 metres was newly excavated. Construction work on the above plans was started in 1924 and was completed, as expected, in the early part of 1929. The estimated cost of the above undertakings was 28,579,065 yen.

In regard to reconstruction of rivers and canals, the primary aim to make them available for navigation of vessels was given first consideration, while attention was also directed for giving every possible facility to warehouses, docks and landing places on the banks.

The following describes the standards on which the canal plan was based:

1. Embankments which had been formerly used were to be improved and made use of as much as possible.
2. The angle of the canals was to be made as gradual as possible.
3. Removal of constructions of a permanent nature which were little damaged by the earthquake was to be avoided as much as possible.
4. Care was to be taken that the removal of underground equipment should be minimized as much as possible.
5. Construction of bridges at an angle with the canal was to be avoided as much as possible.

## RIVERS AND CANALS

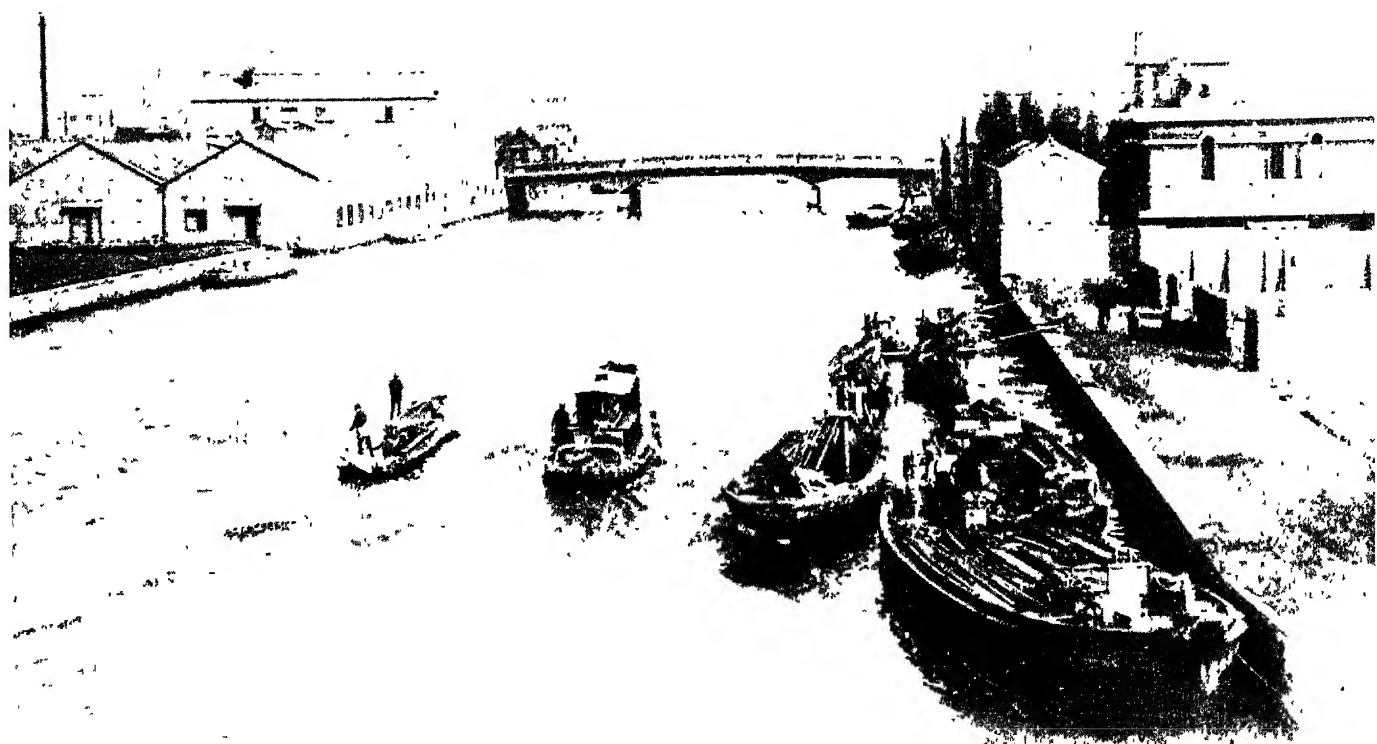


This map shows only those rivers and canals improved and newly excavated by the Reconstruction Work.





A modern type of water facility, a part of Marunouchi, Kojimachi ward



Canals improved

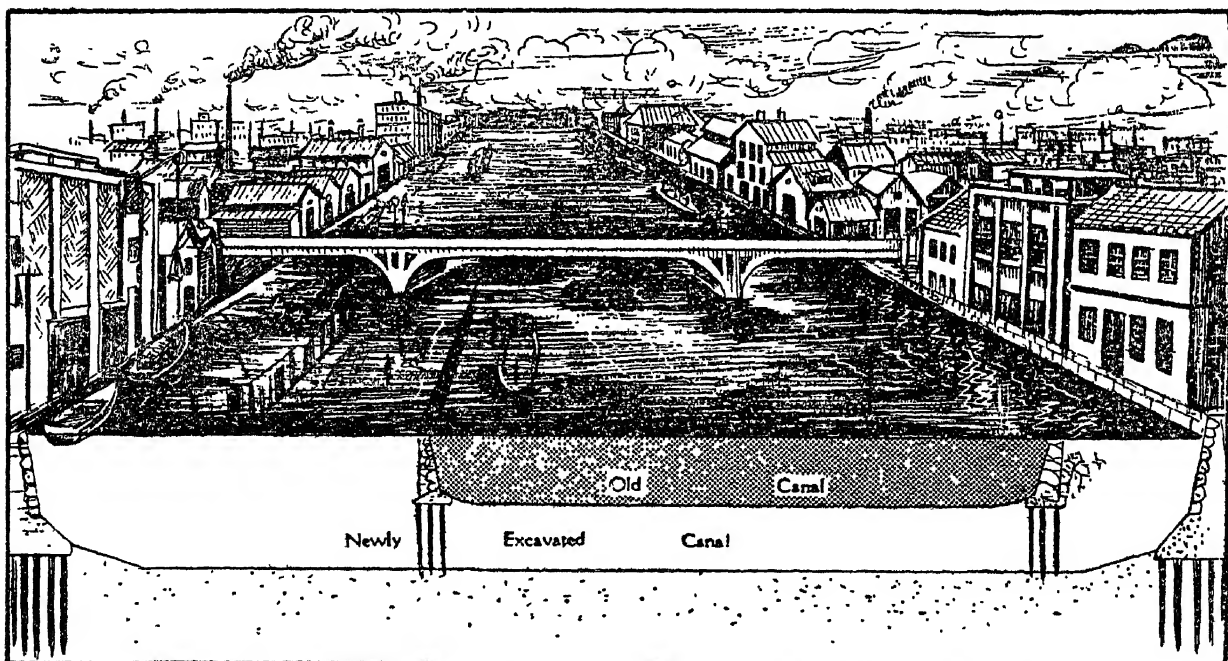
6. Roads were not to be established along canal banks as much as possible.
7. Public landing places were to be established on canal banks.
8. Rounding off corners was to be done at the intersection of canals and at the bends, according to standards.

Canals which could not be used for transportation purposes and not used for drainage purposes were filled in, and the reclaimed land used for roads, landing places or grounds for parks, and also as land to be allotted out under the land readjustment system. The places thus filled in numbered 12, besides a portion of the Outer Moat, and a part of the Sumida Park area, totalling 94,109.09 square metres in all.

Along with the reconstruction plan for the improvement of rivers and canals, the City of Tokyo undertook a separate plan to improve and repair the Arakawa River, and over 20 places, at an estimated cost of 3,290,000 yen. The scheme also undertook to construct dams, landing places as well as mooring equipments, not to mention plans to deepen the rivers. All the necessary construction work was completed by the end of 1931.

Furthermore, the city formulated two other projects, one for the purpose of improving and repairing the canals within the city, and the other for improving Tokyo Bay. The former plan is now being carried out, while the latter undertaking is about to be started.

Canal Excavation





# CHAPTER V

## Parks

### SECTION I

#### OUTLINE

The first parks established in the City of Tokyo were designated as such in the 6th year of Meiji (1873) by the Tokyo Prefecture. These were five in number: the Asakusa Temple ground in Asakusa ward, the Zojo-ji Temple ground in Shiba ward, the Kan-ei-ji Temple ground in Shitaya ward, the Tomioka Hachiman Shrine in Fukagawa ward, and the Asukayama Park in suburban district.

With the increase in the population of Tokyo and in the number of streets, the parks were gradually increased. In the 12th year of Taisho, just before the Great Earthquake of 1923, there were 27 parks, besides Hibiya Park, with a total area of 1,433,471 square metres.

On the occasion of the Great Earthquake, the parks served an extremely useful purpose, both as preventives against fire and also as places of safety for the earthquake refugees. This is well-known to citizens of Tokyo, and hardly needs reiteration here, since the matter has already been discussed rather fully in the chapter dealing with losses sustained in the Great Earthquake.

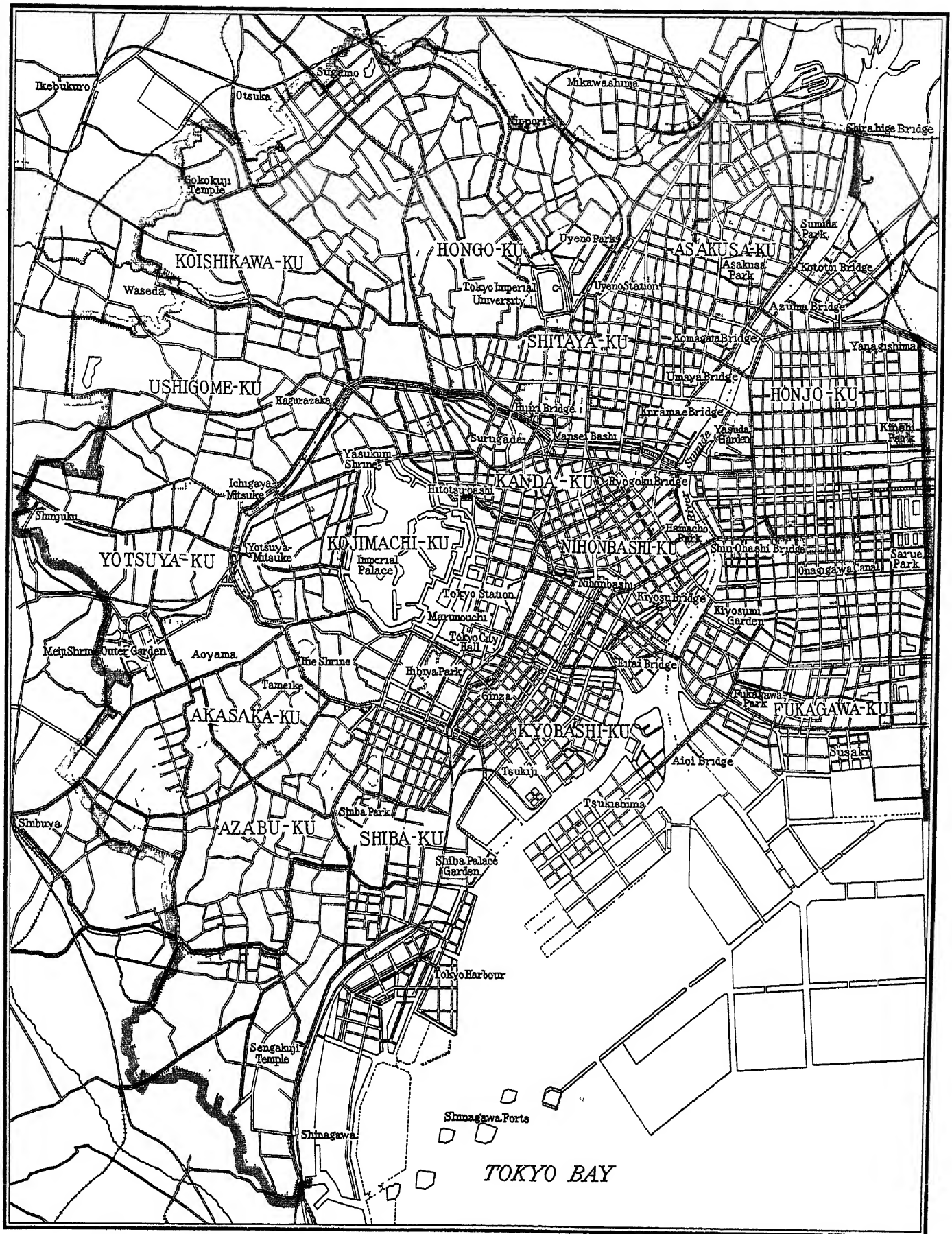
Of the parks in Tokyo at that time, 12 were entirely destroyed by the fire, while 5 parks were partially burnt. Although the rest were saved more or less from direct contact with the flames, the damage caused by earthquake and fire victims who sought refuge within the various parks was so severe that practically all had to be reconstructed.

In the meanwhile, the Shiba Detached Palace Garden at Hamamatsu-cho, the Imperial land at Sarue in Fukagawa ward and Ueno in Shitaya ward were granted to the city by His Majesty the Emperor for use of the citizens, in the 13th year of Taisho (1924), with the very heartfelt sympathy for citizens' sanitation. Besides Iwasaki Family donated Kiyosumi Park, in Fukagawa ward to the city.

The city also established three new parks, at Dote, Daiba and Otsuka, and bought a park site at Yokoami-cho to create another new park. With the completion of the city reconstruction park program, the number of parks in the Capital totalled 92, with a total area of 2,628,135.88 square metres.



# PARKS IN TOKYO CITY



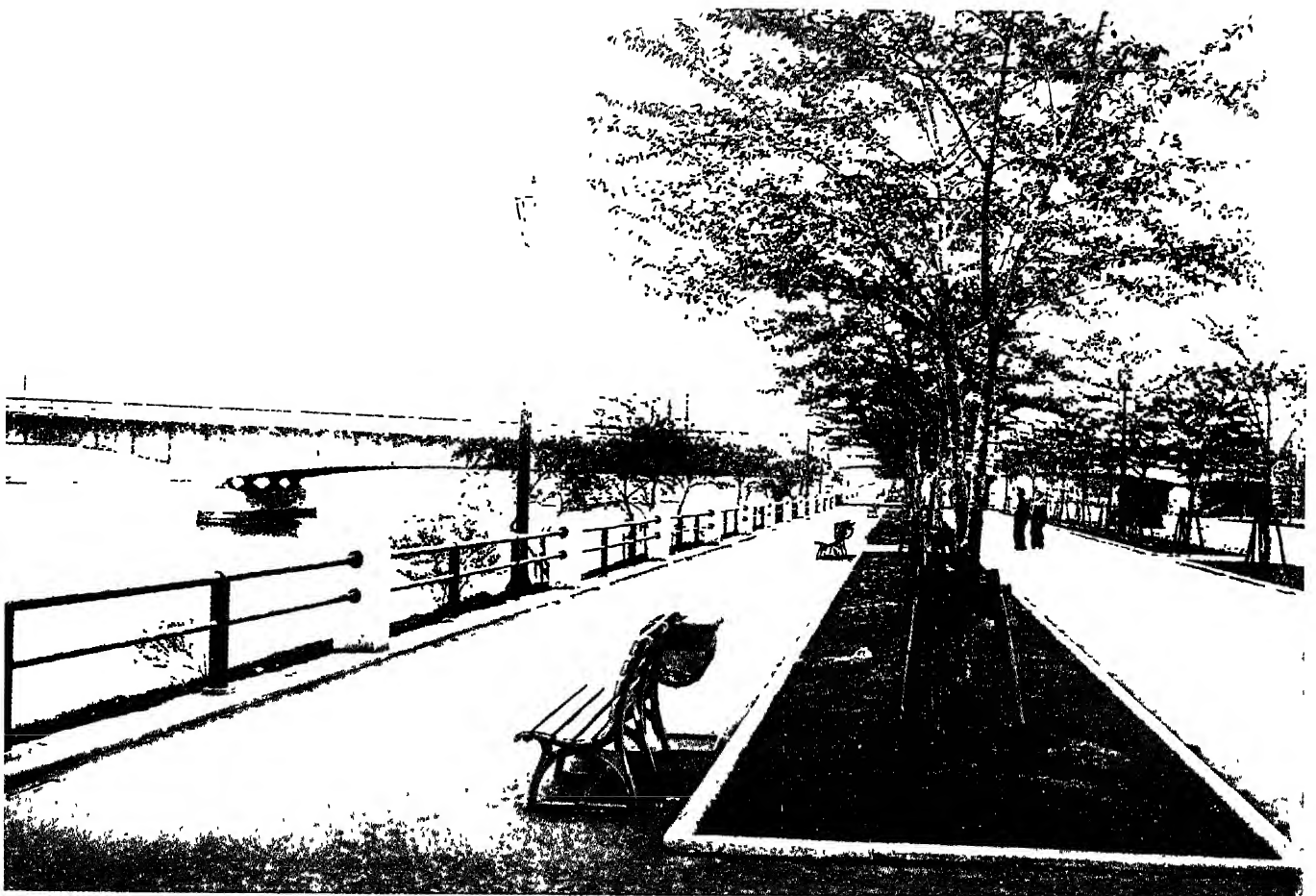
## EXPLANATION :

- |   |                                     |
|---|-------------------------------------|
| Large Parks newly constructed by the Bureau of Reconstruction | Parks improved after the Earthquake |
| Small Parks newly constructed by the Municipality of Tokyo    | Old Parks                           |





River-side of Sumida before the earthquake



Sumida Park, newly created as one of the three large parks



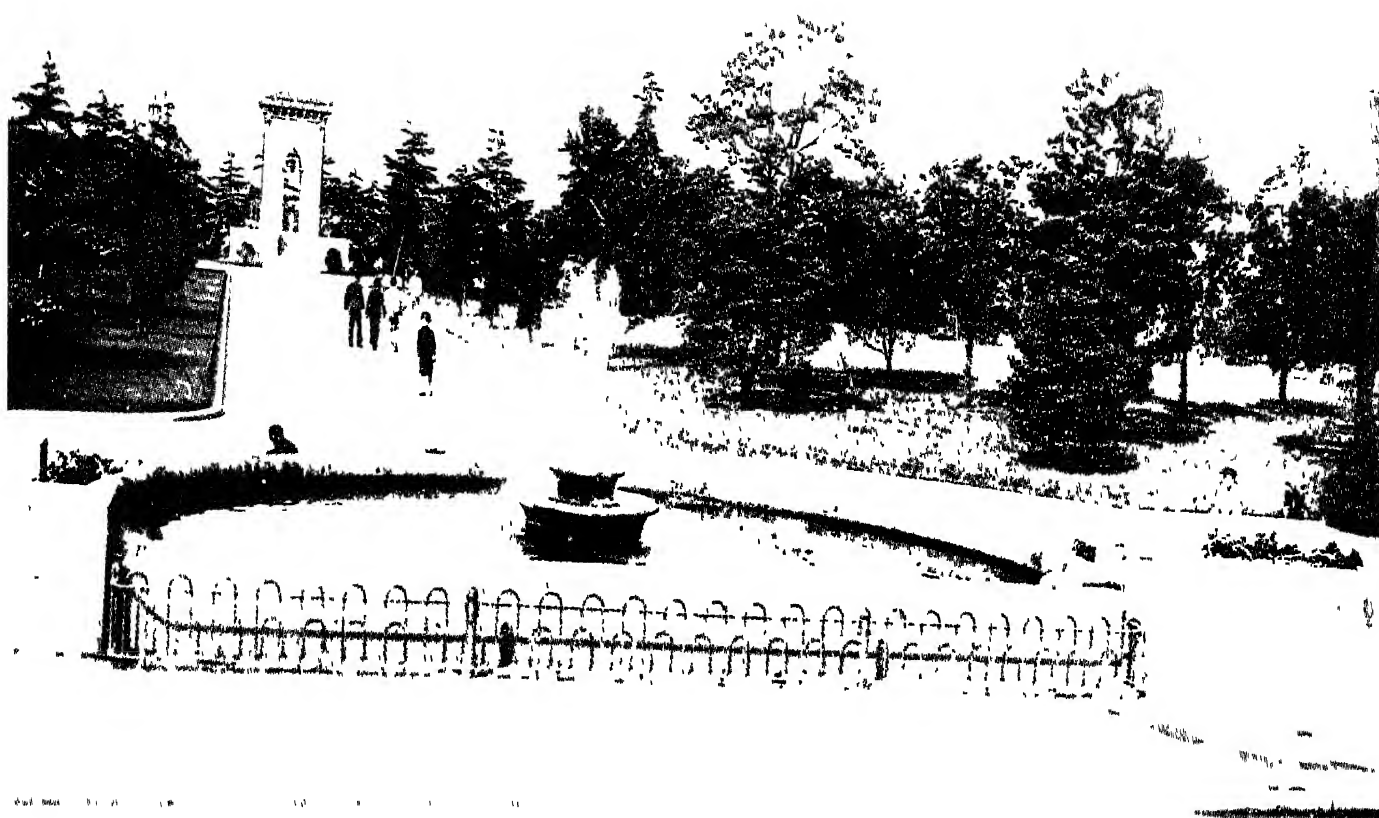
**Hibiya Park in Spring: One of the most favorite parks to the citizens of Tokyo**

## PARKS

In olden times when the regional limits of the city were not so large, and especially when there was no modern industrial organization, the city itself had enough scenes of natural beauty, so that Yedokko (citizens of Yedo) did not know anything about public parks, while there were several precincts of shrines and temples which virtually served as parks; this is proved when we see that the present parks are located at Asakusa, Ueno, Shiba and Fukagawa, where either Buddhist temples or shrines are located, making these precincts the origin of the parks.

Subsequently, as the significance of public parks came to be gradually understood, and at the same time demand on the part of the citizens for parks was getting stronger, a plan for public parks was published in 1890; and in 1903, when Hibiya Park was laid out on modern lines, the parks in Tokyo entered on an epoch-making era.

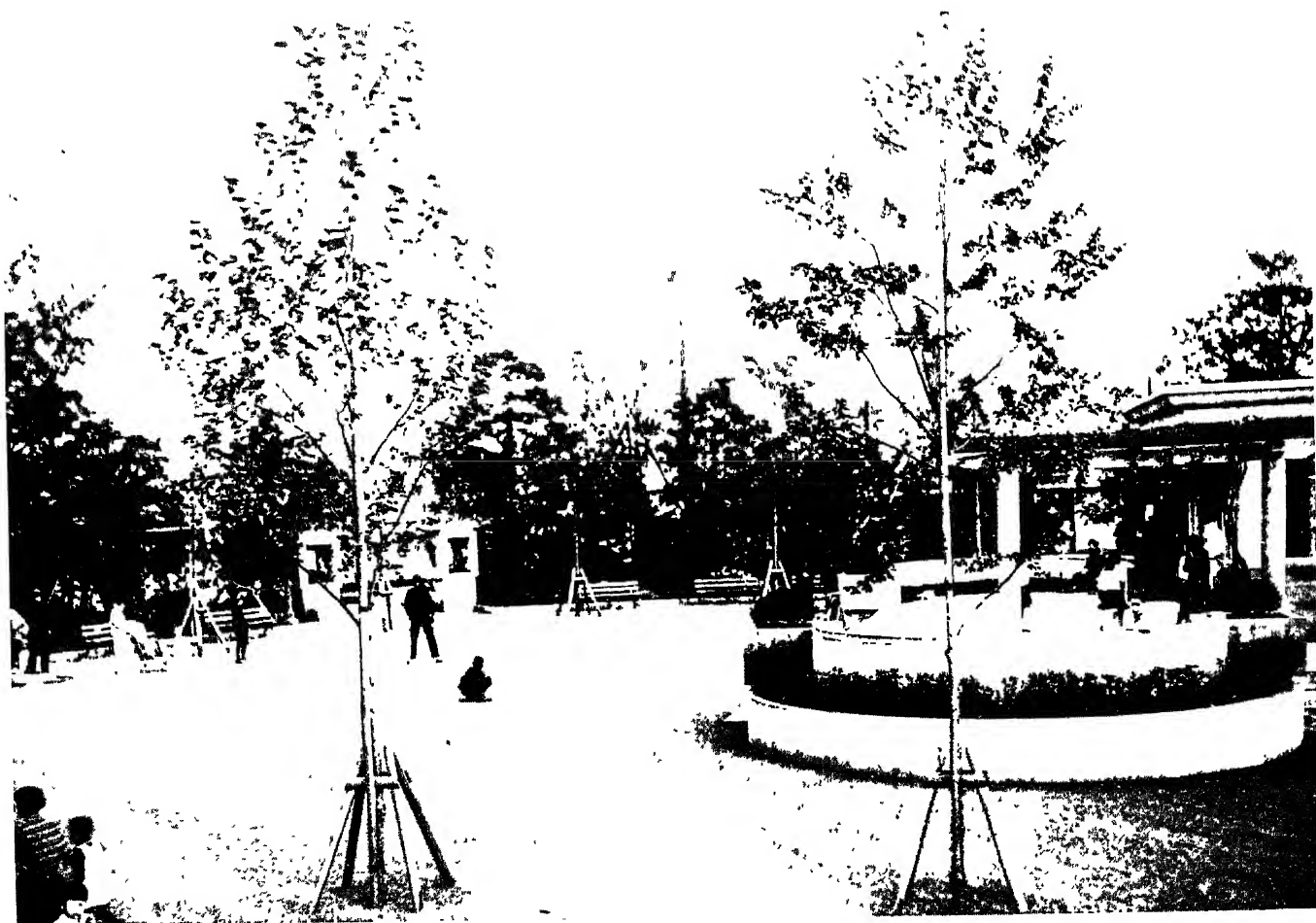
Since then the city tried to avail itself of every opportunity for extension of or addition to the public parks. Fortunately it happened that the Emperor, in gracious consideration for the health of the citizens, was pleased to donate the Imperial land at Inokashira, situated near the City, in February, 1913; the zoological garden of Ueno Park, Shiba Detached Palace Garden and Saruye Imperial land, in January, to be converted into parks. Then the Yasuda family contributed the garden in Yokoami-cho, Honjo ward; while the Iwasaki family did the same as to Kiyosumi garden in Fukagawa, which was followed by the opening of another park called Kinshi Park. Further, there is the outer precinct of Meiji Shrine which, although maintained and managed by the State, is open to the citizens.



**Hamacho Park, one of the three large parks of the Reconstruction Work**

It scarcely needs saying that the evils of modern cities arise principally from congested living conditions. The park is an important social institution that serves to remove or at least alleviate these evils. Parks enable the people of the city to enjoy the scenery and a touch of nature. Parks are the lungs of a city. A park not only purifies the polluted air of the city, and furnishes the city with fair sights, but it has utility as a zone for the prevention of fire or as a place of refuge for city people, in the event of a great earthquake or a conflagration. The parks in Tokyo were, before the earthquake calamity, small in area and quite imperfect in equipment. So the establishment of new public park has received a good deal of attention in carrying out the reconstruction plan.





Municipal Small Parks

## PARKS

This reflects the efforts made by the city to organize a well-planned park system.

The following table shows the parks in the City of Tokyo, including those established under the Reconstruction Program:

Kinds	Under city program	Under reconstruction plan	Total	Semi-parks	Grand Total
Number .....	33	55	88	11	99
	<i>sq. m.</i>	<i>sq. m.</i>	<i>sq. m.</i>	<i>sq. m.</i>	<i>sq. m.</i>
Park area .....	2,144,251.23	412,935.53	2,557,186.80	623,666.11	3,180,852.91
Ratio of park area to city area .....	.027	—	.031	—	0.40
Average park area per citizen .....	.92	—	1.12	—	1.38

## SECTION II

### LARGE PARKS UNDER RECONSTRUCTION PLAN

As part of the special Reconstruction Program for the City of Tokyo, the Government undertook to put into effect the park plan; and as a result, the Reconstruction Bureau started work first on the establishment of three large parks, namely: Hamacho Park, Sumida Park and Kinshi Park. Survey was started in 1924 and the best of data both internal and external, were sought and studied in order to utilize the most modern ideas in park construction. Hamacho Park was completed in March of 1930, while the Sumida and Kinshi Parks were finished in March of 1931, and steps were taken to have over the same to the City of Tokyo.

Details of the three large parks completed under the reconstruction plan follow:

Name	Area	Location	Equipment
Kinshi Park .....	<i>sq. m.</i> 56,124.17	Yanagishima-cho, Honjo ward.	1 track field, 1 colonade, 1 sand pit, 1 wrestling rink, 2 children's playgrounds, 2 tennis courts, 14 athletic equipment.
Hamacho Park ...	44,306.18	Hama-cho, Nihonbashi ward.	1 pool, 1 sand pit, 1 children's play ground, 6 athletic equipments.
Sumida Park .....	189,086.81	Sumida River banks, Asakusa ward, and Honjo ward.	1 track field, 1 pool, 2 ball grounds, 1 boat pond, 2 tennis courts, 2 children's playgrounds, 2 sand pits, 4 piers, 23 athletic equipments, 7 shops.
Total .....	289,517.16		

SECTION III

SMALL PARKS UNDER RECONSTRUCTION PLAN

In order to reconstruct the parks destroyed by the Great Earthquake in the districts which suffered most severely, namely, Kojimachi, Nihonbashi, Kyobashi, Shiba, Hongo, Shitaya, Asakusa, Honjo and Fukagawa wards, the Reconstruction Bureau undertook to establish 52 small parks with an area of three square kilometres for each one. Special efforts were made to establish these in the neighbourhood of Primary Schools, to serve as playgrounds for children, and to help relieve the narrow campus of the various schools. The amount to be expended for the purpose totalled 13,752,175 yen, of which one third was to be paid out from the Governmental treasury. The work was started from 1923 to be completed by 1930 extending eight consecutive years.

Except for slight changes in seven of the parks, the whole program was completed by the fiscal year of 1931.

Because small parks differed from large parks in the main purpose for which they were established, they came to serve an extremely useful purpose; for because of easy access and location and because they served as children's playgrounds, they were used practically every day. As aids to maintenance of health the small parks played an important rôle. In this respect, the large parks, and the 110 or more newly established small gardens in open spaces in the streets in the districts which suffered most from the earthquake also played a vital rôle.

The design of the small parks was not the same for all, although the primary motive to take the best possible advantage of the location and the site to suit modern needs was given careful consideration. Every advantage was taken of the small area to make the parks as useful as possible, without sacrificing either its simple lines or its circular features.

In order to carry the above idea into practice, special efforts were taken to see that the open space, the recreation quarters, and the resting places, etc., were all in conformity with the site as well as the surrounding area. In the planting of trees shrubs and in the planning of various constructions, within and around the park area, pains were taken to see that these did not mar the beauty of the park which was designed as a work of art.

Of the total area of the park, that occupied by trees and plants reaches nearly 48 percent, while children's playgrounds occupy nearly 11 percent. Buildings and ponds occupy about two percent and the remaining area is devoted to other purposes.

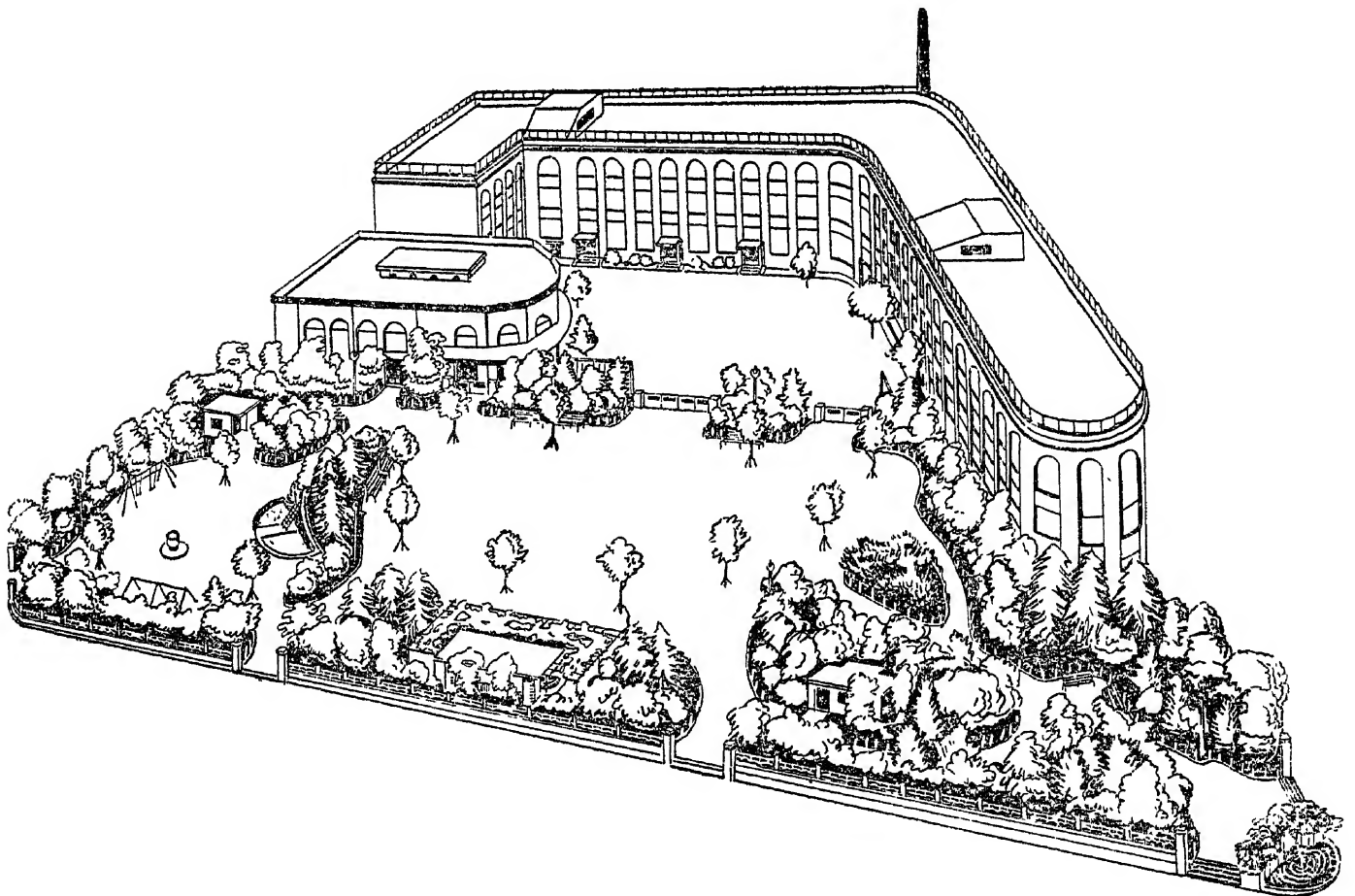


## PARKS

In the children's playgrounds are installed usually a slide board, swings, see-saw, vaulting ladder, parallel bars, iron bars, sand pit, wrestling rink, and other apparatus for children.

Although it was the ideal of the reconstruction officials to create a small park for each of the Primary Schools in the destroyed section of Tokyo, up till the present only 52 parks, or only one-half of the total number for Primary Schools, have been established. The aggregate area of the small parks is 146,159.57 square metres.

Design of a Municipal Small Park



## CHAPTER VI

### Construction of Primary School Buildings

In the past, Primary School Buildings in the City of Tokyo were wooden structures and were exposed to danger from fire and earthquake. Consequently plans were formulated to gradually reconstruct the buildings into concrete structures. When the Great Earthquake came in 1923, 105 Primary School Buildings, 7 Higher Primary Schools and five other schools in the process of reconstruction or newly constructed, making a total of 117 school buildings, were destroyed in Kojimachi and nine other wards within the city. These were all to be rebuilt under the Reconstruction Program, into fire and earthquake-proof, steel-framed or reinforced concrete structures.

The School Reconstruction Program was started in 1924 to be continued for seven years until the fiscal year of 1930, at an estimated expenditure of 41,056,383 yen. The reconstruction work was carried out individually by the different wards which were to be indemnified by the city under the latter's planning and supervision.

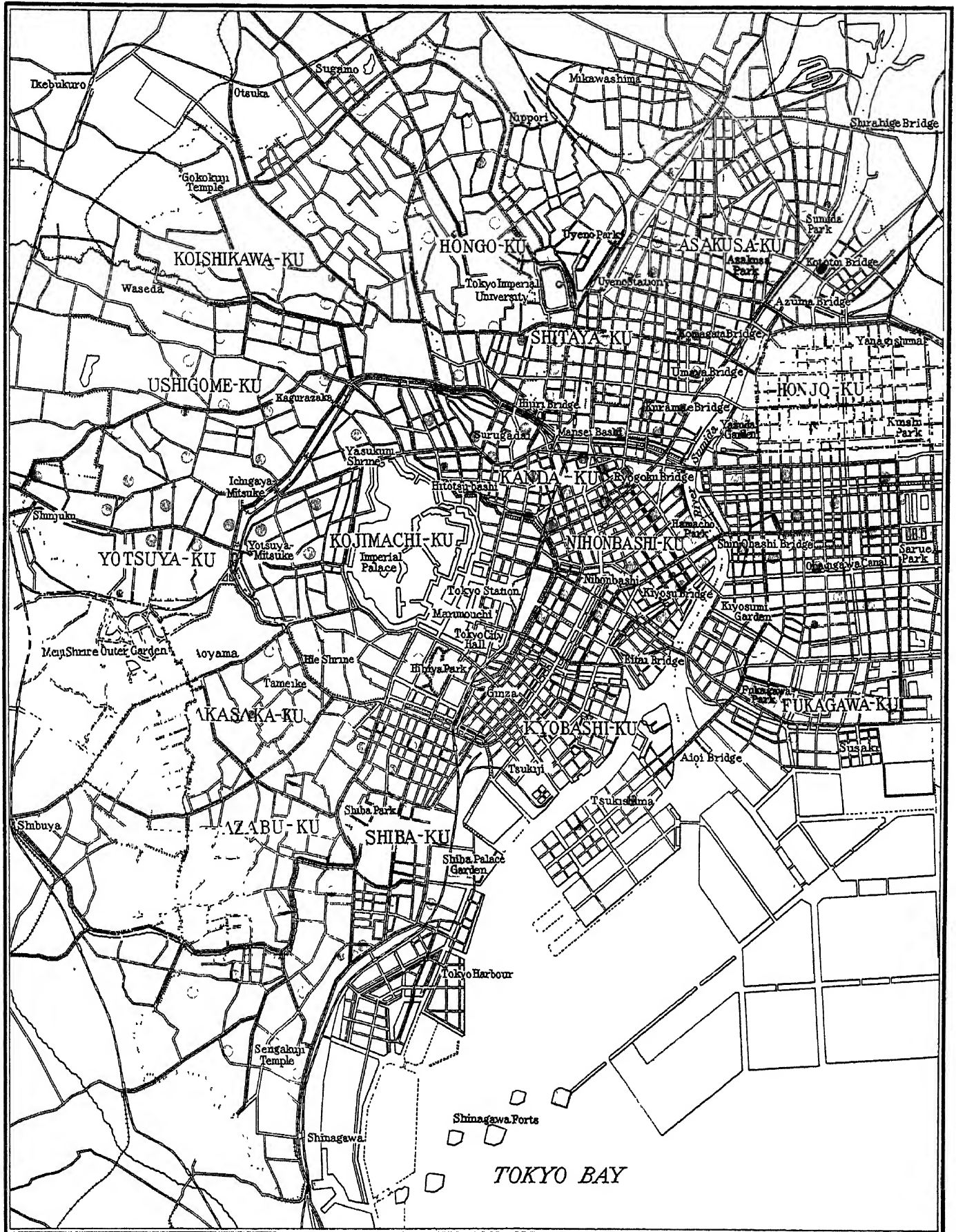
Further, in regard to the costs of Primary School construction, 8,191,786 yen was allotted from the special continuous reconstruction budget.

In making a general survey of the scale and construction of the Primary School Buildings, the following plan was adhered to. In the first place, consideration was given to each district in regard to the number of school buildings and their locations to see that they were reconstructed as much as possible in the same places as before, taking into consideration school transportation facilities, its relation to schools in other districts, and the city reconstruction plan. Only those schools whose locations were entirely unpracticable were changed.

The size of each individual school was determined according to the standard of 24 classes. (The schools range all the way from 16 to 32 classes) All constructions were to be of reinforced concrete and three storeys high, with a basement depending upon the ground on which they were to be constructed.

In the main, the basement was to contain a washing room, a storage room, lavatory rooms, etc., and in some cases, special lecture rooms were also put in. As necessary equipments, steam or hot-water heating system, electric, water, gas and sanitation system (flush toilet) were put in. For an indoor

# MUNICIPAL PRIMARY SCHOOLS



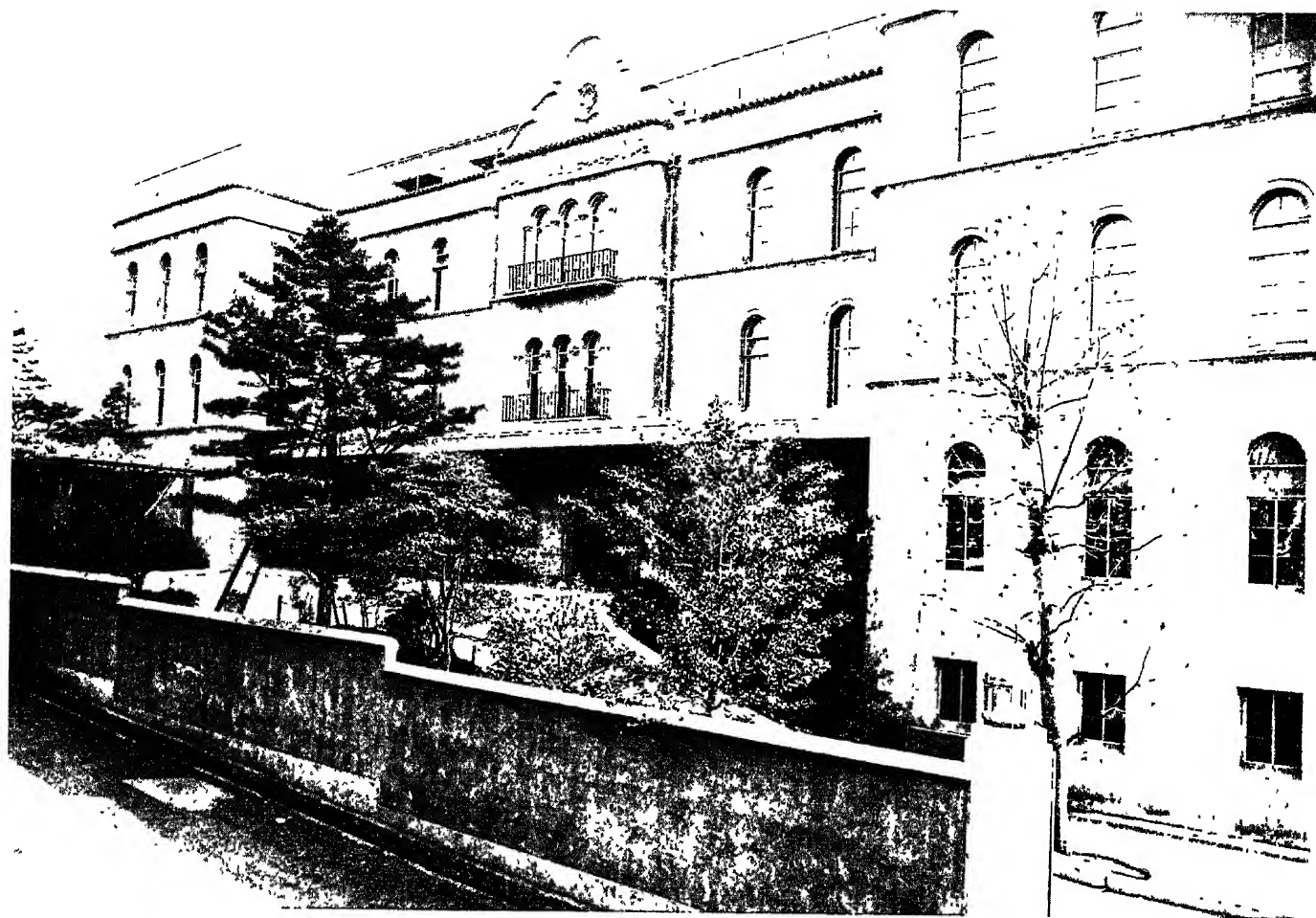
## EXPLANATION :

○ Ordinary Primary Schools

● Higher Primary Schools

● Higher & Ordinary Primary Schools





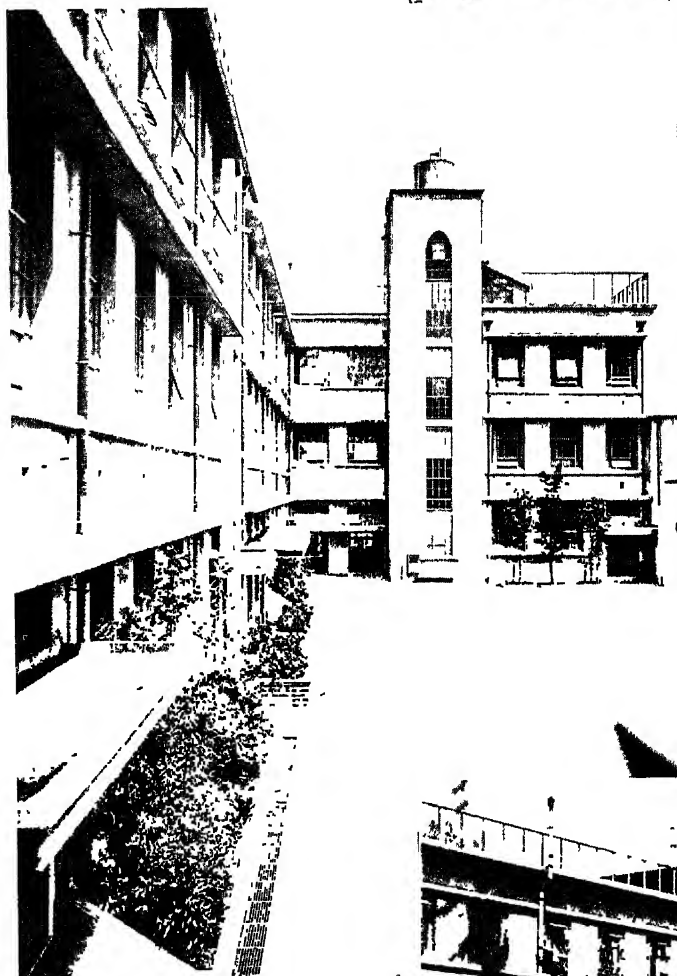
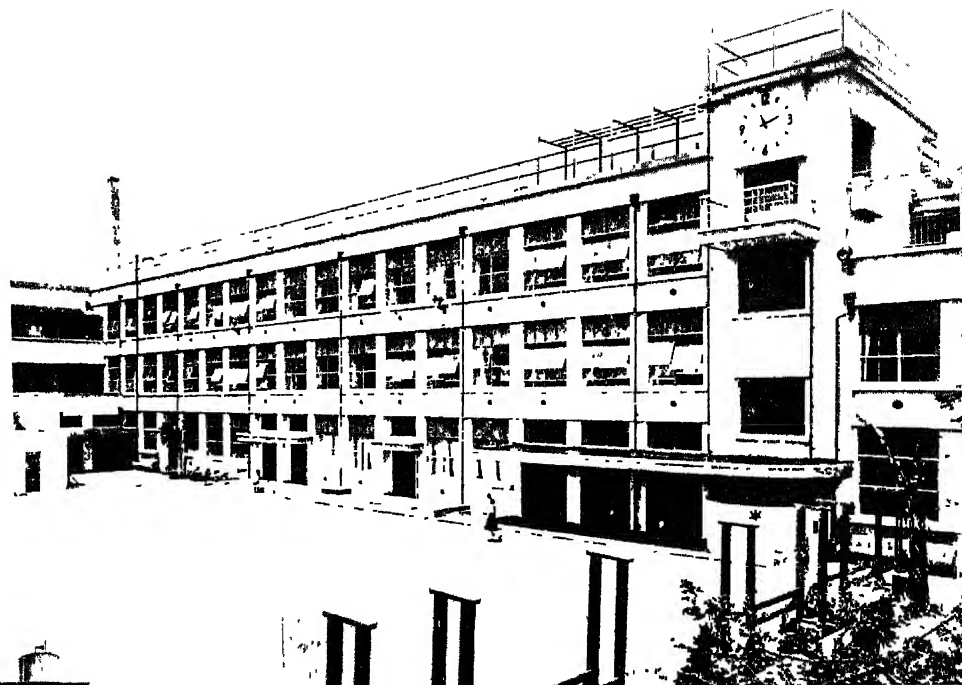
A Primary School Building rebuilt

## EDUCATION

The educational facilities operated by the Tokyo municipality consist principally of primary schools, primary night schools, and elementary business schools; and partly of kindergartens, middle schools, girls' high schools, commercial schools, numbering 343 in all; and being a local self-governing body, the municipality has almost nothing to do with college and university education. For social education, the city possesses and operates libraries, young men's training schools, public meeting halls, and the signal sirens, and temporary training schools, lectures, exhibits, concerts, cinemas, physical training schools, etc., the city making itself always an educational leader of the citizens.

Previous to the great seismic disaster of 1923 there existed in Tokyo over 200 primary schools maintained by Municipality. These schools were all wooden structures; and as these wooden buildings could hardly last for over thirty years, the Municipality had to reconstruct them at the rate of 4 or 5 every year. This being very uneconomical and a very heavy burden on the Municipality, the authorities decided several years ago gradually to reconstruct all those schools as steel-reinforced buildings. Several schools which had been reserved for this special treatment were being reconstructed in this semi-permanent style in 1923 when the great earthquake occurred, and 112 out of over 200 primary schools in the afflicted districts were destroyed by the quake or subsequent conflagration. As soon as order was restored in the city, school work was resumed in tents or barracks temporarily erected for the purpose, and at the same time a plan was formulated for the reconstruction of the schools destroyed in the quake and fire as an undertaking to run for 5 consecutive years, commencing 1924.

All schools were to be three story buildings of reinforced steel and concrete, quake-proof and fire-proof.



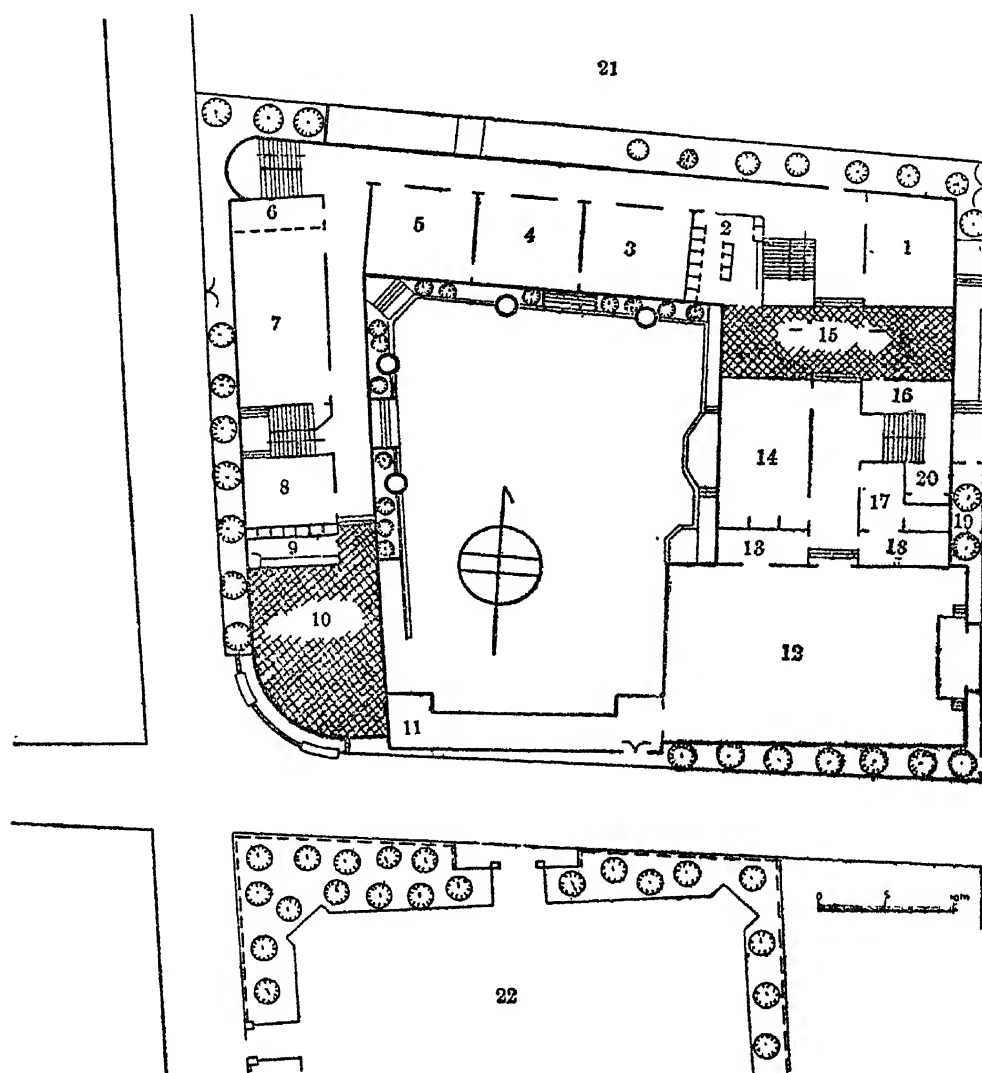
Reconstructed Primary School Buildings



## CONSTRUCTION OF PRIMARY SCHOOL BUILDINGS

athletic room, the auditorium was to be used; for out door recreation, a special playground was provided and equipped with athletic equipments: sand pit, swimming pool, etc. Besides the above, places for small animals, birds, and fishes were provided, so that these could be used as references for educational purposes. On the roofs of the buildings were provided spaces for athletic exercises to supplement the lack of a regular outdoor playing ground; and, in some cases provided with a roof garden.

Design of a Municipal Primary School



- |                         |                               |                               |
|-------------------------|-------------------------------|-------------------------------|
| 1. Teaching Room        | 8. Specimen Room              | 15. Entrance                  |
| 2. Toilet               | 9. Toilet                     | 16. Place of Hot-water Supply |
| 3. Teaching Room        | 10. Entrance                  | 17. Reception Room            |
| 4. Teaching Room        | 11. Corridor                  | 18. Sanitary Room             |
| 5. Teaching Room        | 12. Indoor Gymnasium          | 19. Room for Night-watch      |
| 6. Room for Preparation | 13. Keeping Room for Utensils | 20. Janitors' Room            |
| 7. Manual Training Room | 14. Teachers' Room            | 21. Adjacent Land             |
|                         |                               | 22. Nishi-kanda Park          |



# CHAPTER VII

## Water Works

The modern water-supply system of the City of Tokyo was established in the 23rd year of Meiji (1890) under a plan submitted by the Tokyo City Improvement Committee. The undertaking took approximately 20 years, the water source being the Tamagawa River. The daily supplying power at that time was 170,000 cubic metres, the estimate being based on a 1,500,000 population, with an average consumption of 112 litres per capita per day.

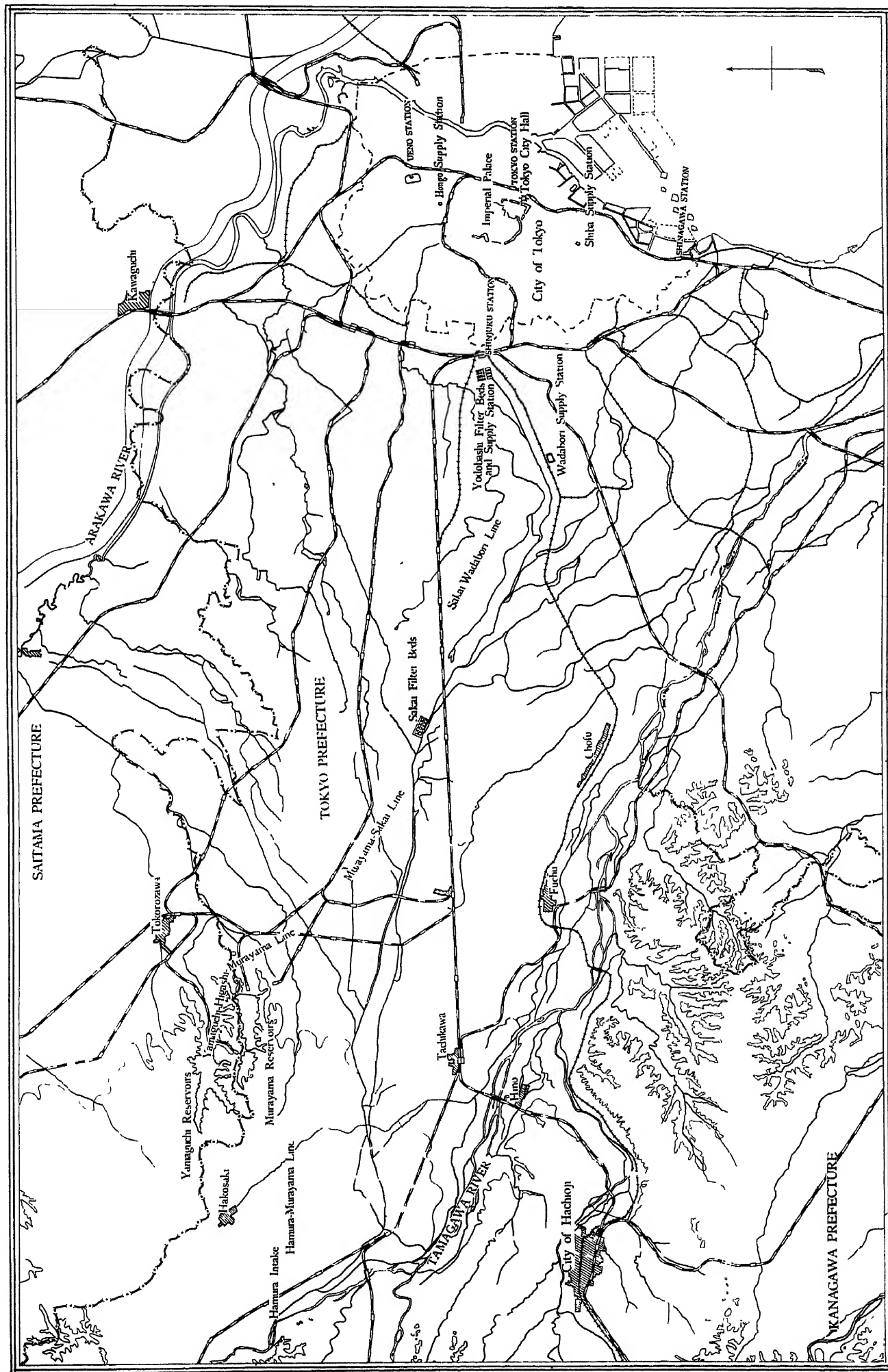
Later, with the increase in population and in the amount of water consumed, there arose the necessity of expanding the water main system. Consequently in 1913, a 16 year plan to extend the water system capable of supplying 500,000 cubic metres a day was approved. This was based on a population of 2,600,000 with an average consumption of 185 litres per capita per day. The estimated cost of the expenditure was 47,600,000 yen and the construction program was to be divided into two parts: the first part to cover the period from 1913 to the fiscal year of 1923 with a budget of 36,100,000 yen; and the second period from the fiscal year of 1924 to the fiscal year of 1928 with a budget of 11,500,000 yen.

When the program for the first part was just about to be completed, the Great Earthquake of 1923 destroyed the greater part of Tokyo, and the program had to be temporarily suspended. The second part of the undertaking which was to have begun in 1924 was likewise suspended, due to drastic changes in the financial condition of the City of Tokyo, which made it impossible to continue the work.

However, those parts of the water system which of necessity had to be hurried were included in the Reconstruction Program of the city, and the construction work undertaken in 1923 to extend for four consecutive years to the fiscal year of 1926. The program was later extended two more years, and completed in 1928. The budget for the above program totalled 10,000,000 yen.

Besides, in the development of the steel water pipe system, a total of 15,000,000 yen was budgeted on a three-year plan from the fiscal year of 1926 to the fiscal year of 1928. This program was carried out in connection with the land readjusting system and the Reconstruction Program, and was later extended for two more years, until 1930. What parts of the program which were still unfinished then, were continued to the next year.

This is a detailed black and white map of the Tokyo region, showing the extensive Arakawa River system and the Sagami River. The map includes major prefectures: Saitama, Tokyo, and Kanagawa. Key locations marked include the City of Tokyo, Utsunomiya, Maebashi, and various reservoirs like Yamanaka and Muro. The map also shows the extensive railway network, including the Sagami Line and the Arakawa Line. A compass rose is located in the upper right corner.







Air view of the water reservoir at Murayama, suburb of Tokyo

#### WATER WORKS

After the Tokugawa Shogunate Government was established in Yedo, some 340 years ago, the authorities, owing to the bad quality of well water in the town, constructed a water-work system, taking the water of the Inokashira pond in a western suburb to the town, to supply the citizens with wholesome drinking water and to provide for the future growth of city population. (Inokashira pond which is the fountain head of very clean spring water now forms a municipal park.) This was the pioneer water works, the forerunner of the present municipal water works of Tokyo. The supply from this source having become insufficient because of the growing prosperity of the town and the steady increase of population, some sixty years later a new system of water works was built to conduct to the city the water of the Tamagawa river in the suburb. This new water works was named the Tamagawa-Suido, and forms the trunk line of the present municipal water works system.

But the remarkable development of the city and the increase of population since then necessitated further extensions in the water-supply system. Thus extension work was again decided upon and taken in hand in 1913.

While the aforementioned extension work was in progress and the new supply of water was partially opened in 1923, the occurrence of the unprecedented seismic disturbances wrought extensive damage and dislocated the entire water-supply system. The extension work, which was nearing completion, having thus come to end, the municipal authorities decided to start repairs of the previously completed sections damaged by the earthquake and to expedite the completion of the remaining portion of the extension program, at the same time altering part of that previously decided in the capital reconstruction program.



Air view of Kiyosu-bashi Bridge (Photo: The Tokyo Nichi-Nichi)

## WATER WORKS

The details of the undertaking are as follows:

1. The extension and rapid completion of the undertaking took five years from 1924 to 1928 at a cost of 4,700,000 yen:
  - a. Construction of Murayama Reservoir,
  - b. Extension of water main (4,672.72 metres),
  - c. Three filter beds of Sakai Cleaning Water Reservoir.
2. Restoration Program:
  - a. Repairing of conduits damaged at six places and sunken drains at several places along the entire water line,
  - b. Repairing of damaged equipments and interior of Yodobashi Cleaning Reservoir,
  - c. Repairing of steel water-pipes within the city, raising water mains, building bridges for crossing water mains and repairs to othre such related matters, cost of survey for purifying water, etc.

For the above purposes the sum of 5,300,000 yen was expended during the six consecutive years from 1923 to 1928.

### 3. Steel Water Pipe Construction:

The total length of water mains altered or increased in the districts destroyed by the Great Earthquake was approximately 826,227.27 metres.

Details are as follows:

#### Laid along Roads and Streets

Moved and extended . . . . .	237,347.27 metres
Increased . . . . .	560,283.63

#### Along Bridges and Making Connections

Moved and extended . . . . .	13,892.72
Increased . . . . .	3,432.72

#### Connected with Canal and River Construction

Moved and extended . . . . .	11,269.09
------------------------------	-----------

The above program was to have been completed under a three year plan from 1926 to 1928 at a cost of 15,000,000 yen, but the program was extended two years more. Remaining parts of the undertaking still left over were completed in the following year 1931.



# CHAPTER VIII

## Sewerage Works

The first concrete plan to establish a modern sewerage system in the City of Tokyo was formulated in the 41st year of Meiji (1908), the work to be carried out in three periods. The first period was started in 1911 and the second in 1920, while plans for the undertaking in the third period were later decided and approved.

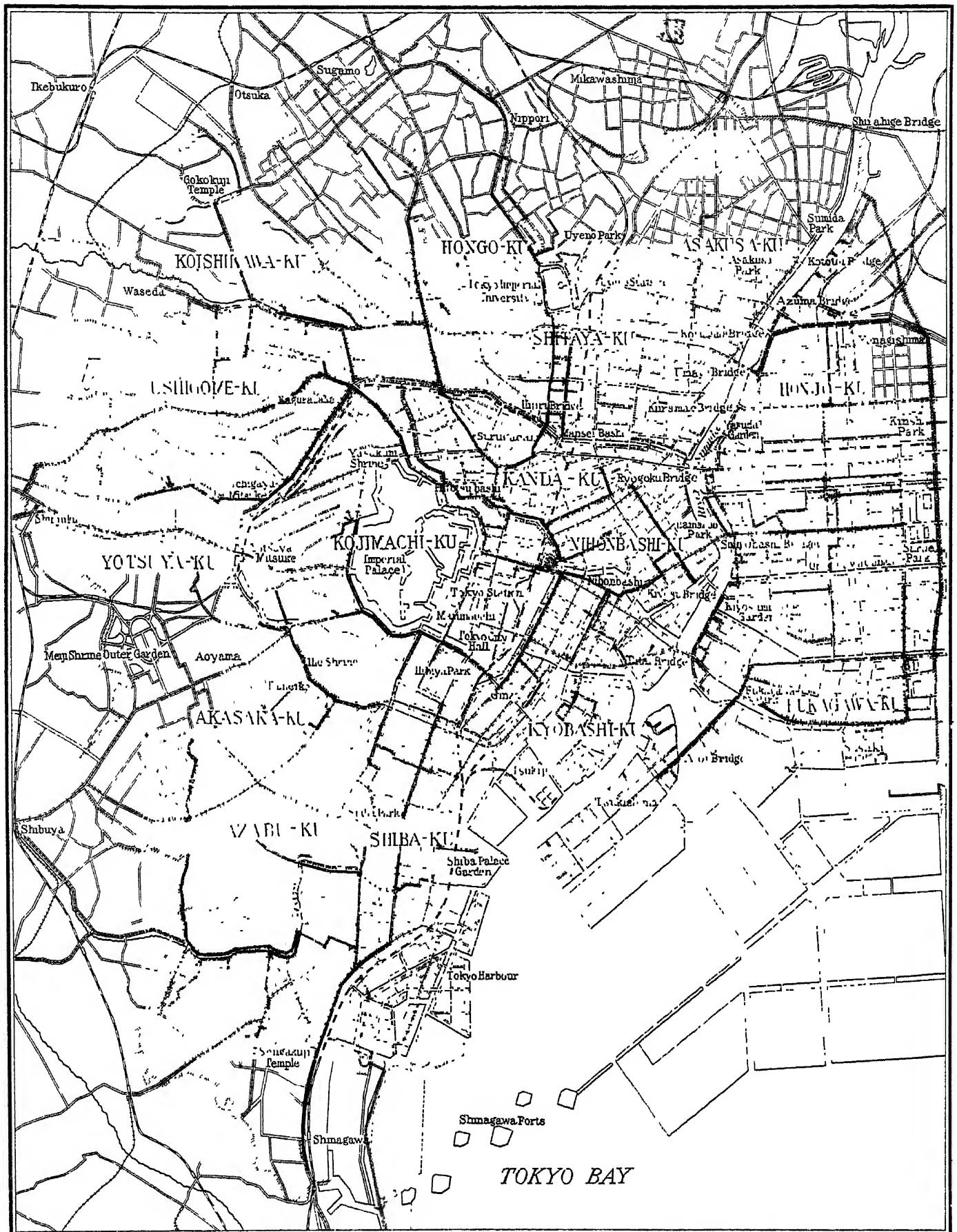
For districts in which the sewerage system was not yet introduced and where drainage of rain water was imperfect, work on the sewer or gutter drain was started as part of the rush construction in the fiscal year of 1916. This work was completed in the fiscal year of 1920. As a result, the construction work for the first period was practically completed in 1923.

While the program for the second period was half completed and steps about to be taken for undertaking the third period, the Great Earthquake of 1923 occurred and completely disrupted the above programs. Consequently, these plans were included in the reconstruction program at an estimated expenditure of 43,500,000 yen. Under the reconstruction plan, damages caused by the earthquake to the drainage system which had already been completed during the first period and part of the second period were to be repaired, and that part which had been still under construction in the second period was to be entirely completed. It was also decided to construct a part of the program formulated for the third period. The above program was to have been completed under a six-year consecutive plan from the fiscal year of 1923 to the fiscal year of 1928. However, in view of its connection with the land readjusting system and in view of the progress made in sewerage construction itself, the estimate was revised and decreased to 40,211,321 yen. The duration of construction likewise was revised and extended to the fiscal year of 1929, for which approval was obtained from the City Assembly in March of the same year. The execution of the remaining part of the sewerage program for the second period and part of the program for the third period were likewise extended for one year because of its connection with the land readjusting and street construction systems. The approval for the above changes was obtained from the City Assembly in March of the same year. Part of the construction program which was left still incomplete was to have been undertaken in the fiscal year of 1931 as a supplementary program.

Details of the full sewerage program are as follows:



# SEWARAGE SYSTEMS



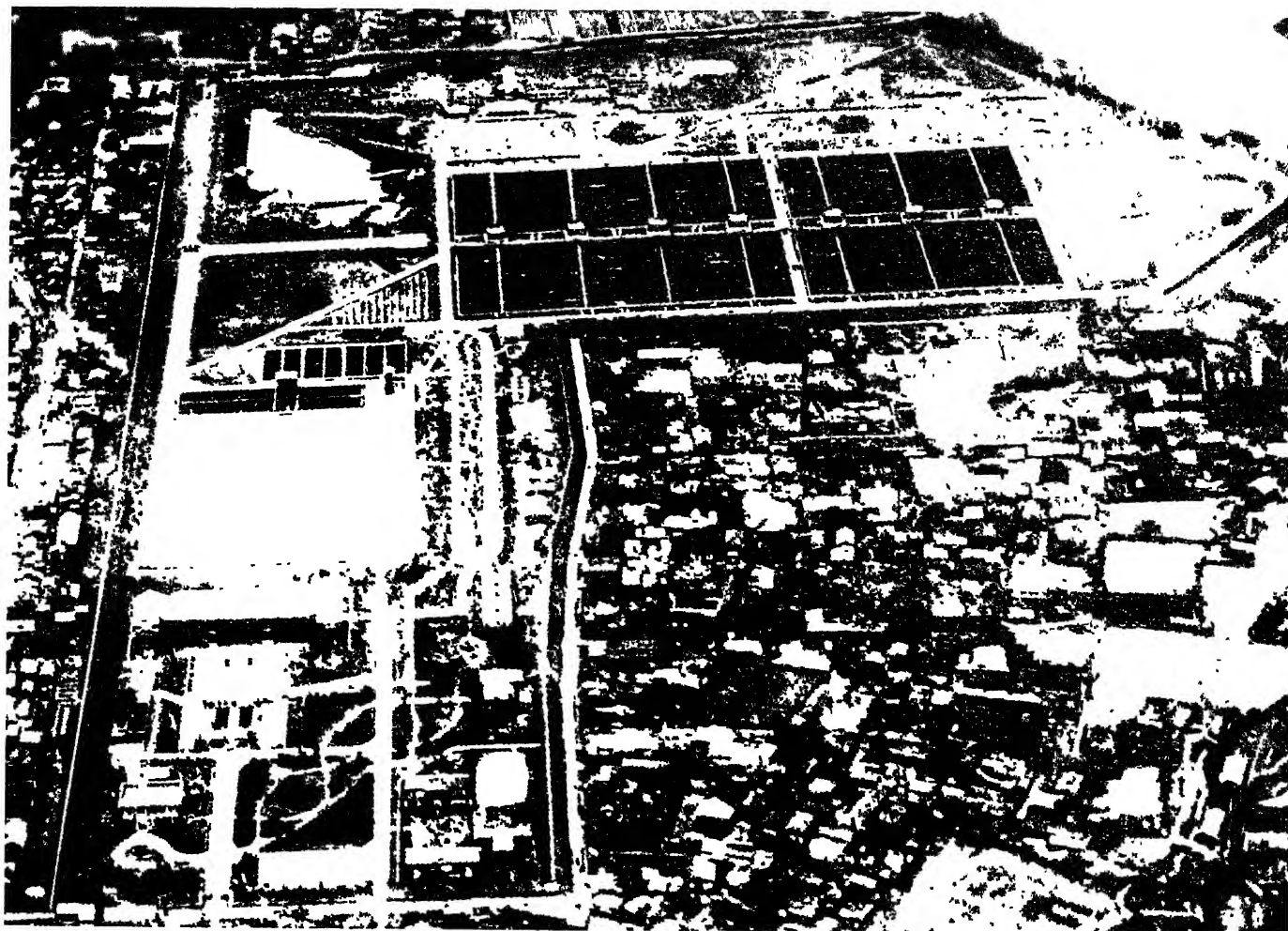
## EXPLANATION

1st District  
Main Trunks

2nd District  
Sewage Disposal Plants

3rd District  
Pumping Stations





Air view of the Sewage Disposal Plant at Mikawashima, suburb of Tokyo

#### SEWERAGE SYSTEM

The scheme for the construction of a modern sewage system in Tokyo was first drawn up in 1908 by the City Street Improvement Commission. Previous to this, the improvement of the sewage system was recognized as a matter of imperative necessity from a sanitary point of view, and a draft plan for its construction was framed as early as 1888; but the execution of the scheme had to be postponed because of financial and other reasons, till a concrete plan was mapped out in 1908. For the execution of the plan the work was divided into three periods. The 1st period work covering a portion of the downtown section of the city and spread over 14 consecutive years was started in 1911 and completed in 1924. Of this work the filter-bed created at Mikawashima is the largest of the kind and is unparalleled in the Orient for its perfect equipment and large scale.

The 2nd period work covering the important section or centre of the city was commenced in 1920, but while the work was under way its progress was brought to a standstill owing to the disaster, which destroyed part of the previously completed sewage system. Under the Reconstruction Work, which was started soon after the catastrophe, the remaining portion of the 2nd period work was taken up and completed in due course, together with the construction of important fundamental work on the sewage system in the devastated area, which formed part of the 3rd period work.



Evening sight of Ueno Station, the railway centre of the eastern part of Tokyo, Shitaya ward

## SEWERAGE WORKS

### 1. Restoration of Sewerage System damaged by the Earthquake:

The following deals with the reconstruction of the sewerage system which was completed in the first period extending from 1911 to 1923, which was burned or destroyed by the Great Earthquake. This includes the reconstruction of the main sewerage system undertaking in the first period as well as the gutter drainage system which was completed as part of the rush construction plan. This also includes the equipment at the Mikawashima Sewage Disposal Works and the Asakusa Pumping Station. The estimated cost of the reconstruction was 374,000 yen, excluding office expenditure and the like. The construction was started immediately after the earthquake and was to have been completed by the end of 1923. However, owing to scarcity of materials and labor a change in part of the plan was made necessary. As a result of the above change, the estimate was also revised and decreased to 318,369 yen. Along with the change in the original plan the period of construction was likewise postponed for a year, and completed in 1924.

### 2. Construction of the remaining part of the sewerage program and emergency readjustments:

The construction of the second part of the Tokyo City sewerage system (comprising the greater part of Asakusa, Kanda, Hongo wards, and a part of Shitaya ward) was to have been completed in 13 years from 1911 to 1923, as part of the first period construction program, just before the earthquake of 1923. The estimated expenditure for the above reconstruction work was 226,317 yen, excluding office and such miscellaneous expenses. The work was to have been completed in 1923 but owing to lack of materials and labor a part of the program had to be changed. Consequently, the period of construction was likewise altered and had to be postponed a year, and was completed in the fiscal year of 1924.

### 3. Construction of the remaining part of the sewerage system of the second period:

The reconstruction of the sewerage program undertaken in the second period from 1920 to 1927 (this part includes the Marunouchi district in Kojimachi ward, all of Nihonbashi and Kyobashi wards, and a part of Shiba ward) was more than 21.6 percent completed and was making fairly rapid progress at the time of the Great Earthquake. After the earthquake, the unfinished part of the program was discontinued, and others were included in the Capital Reconstruction Program. Although slight changes were made in the origi-

nal plans, the construction was to have been undertaken under a six year consecutive plan from the fiscal year of 1923 to the fiscal year of 1928, at an estimated expenditure of 15,110,000 yen, excluding office and sundry expenses. However, the estimate was revised and decreased to 13,409,823 yen, and this was further reduced to 12,897,680 yen in view of changes in the original plan and because of other reasons. Approval for the above changes was obtained from the City Assembly in March of 1928. The period of construction was also prolonged for a year, to the fiscal year of 1929. Further changes were made necessary in the work of construction because of its relation with the land readjusting system, so that the sewerage program was again extended a year, for which approval was received from the City Assembly in March of 1930. Thus the full program of construction was to have been completed by the fiscal year of 1930, and if there were still any portion left unfinished, it was to have been completed by the following fiscal year.

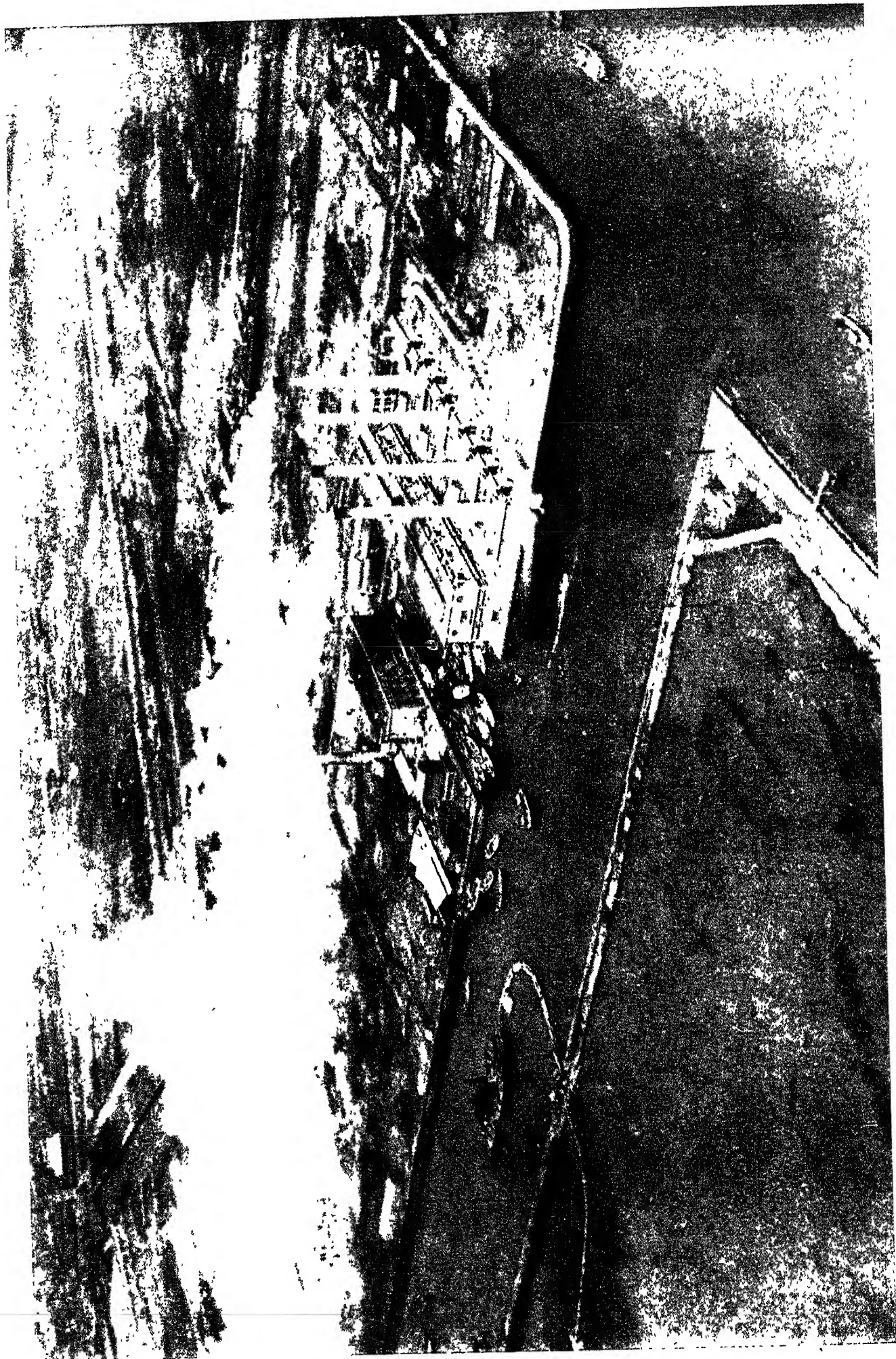
Furthermore, the construction of the emergency sewerage system was taken in hand together with the land readjusting system. This meant the removal and readjustment of the permanent sewers which directly obstructed the reconstruction of streets or barred the removal of buildings, etc. The expenses were to be paid by the Government as a subsidy, the estimated amount being 1,600,000 yen. The work was to be completed from the fiscal year of 1924 to the fiscal year of 1928. However, in view of its connection with other reconstruction undertakings the period of construction was extended a year and finally completed in the fiscal year of 1929. The length of the removed and extended sewerage line was 30,459.99 metres.

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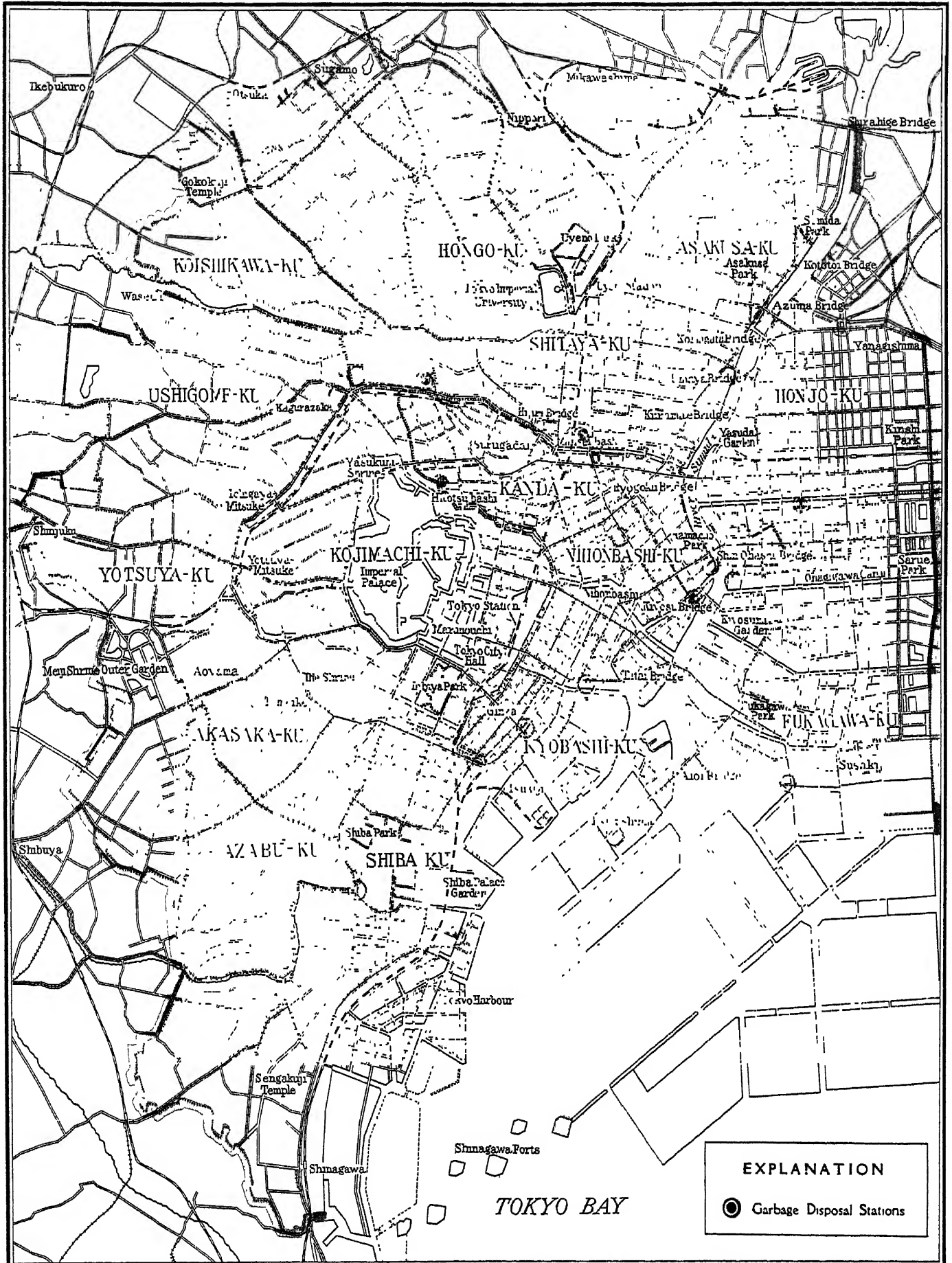
A profile of "Marunouchi," the business centre of Tokyo





Tokyo Municipal Garbage Incinerator, Fukagawa ward

# GARBAGE DISPOSAL WORKS





# CHAPTER IX

## Equipments for Disposal of Garbage

The amount of garbage produced in the City of Tokyo at the present time reaches the astonishing total of 956,250 kilograms a day. To gather all this garbage a total of approximately 1,300 persons is employed daily, at a yearly expenditure of not less than 1,600,000 yen. The garbage is taken to the reclaimed land near Heikyu-cho, Fukagawa ward, and burned. The ashes and incombustible substances are used as materials for reclaiming land. However in view of the fact that the expansion of the city could not be fundamentally solved under such an inadequate policy, a special German method for disposing of refuse in the most appropriate way was decided on after many years of investigation and study. This method of garbage disposal takes advantage of the incinerator system. Formerly there were 34 places in Tokyo which disposed of garbage but the number was reduced to 25 and three new disposal factories established. All these factories were to be of fire and earthquake-proof buildings and equipped with the the most efficient machines to dispose the refuse with all possible speed. The program was to be carried out at an estimated cost of 1,850,000 yen under a three-year plan from the fiscal year of 1924 to the fiscal year of 1926 inclusive. However, in view of the fact that various places selected for the disposal ground were affected by the land readjustment plan and because a change was made in the original project, the refuse disposal system did not make the progress expected, and as a consequence, the program was extended into a four-year plan to be completed in the fiscal year of 1930. Thus the construction of the Sakuma-gashi and Shimbashi Disposal Stations as well as the second and the third refuse disposal factories was left over to be undertaken in the fiscal year of 1931 due to lack of funds under the original schedule.

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Below are given the number of garbage disposal stations in each ward, constructed as the Reconstruction Work:

Ward	Number	Ward	Number
Kanda . . . . .	6	Koishikawa . . . . .	2
Nihonbashi . . . . .	3	Asakusa . . . . .	3
Kyobashi . . . . .	3	Honjo . . . . .	2
Shiba . . . . .	3	Fukagawa . . . . .	2
Ushigome . . . . .	1		

# CHAPTER X

## Municipal Hospitals

There are five hospitals established within Tokyo and its suburbs, which are run on a basis of actual expenses and do not charge consultation fees. The daily number of out-patients, estimated at 1,000 of which 70 percent pay for the actual cost of the medicine and the operation fee. The remaining 30 percent are given free treatment, this being limited to those who are too poor to pay. These are exempted from paying either the cost of the treatment at the hospital or for accommodation in the hospital.

The courses of treatment given at the different hospitals are determined by locations of ailment and courses considered necessary were established first, so that the combined courses given at two or three hospitals cover all the departments.

The above program was to be carried out under a four-year plan at an estimated expenditure of 3,100,000 yen from the fiscal year of 1924. However, owing to difficulty experienced in obtaining suitable locations, and to changes in the original plan, the undertaking failed to make the progress expected, and the period of enterprise was extended three more years, to be completed in the fiscal year of 1930. A part of the latter plan was further prolonged to be completed by the following year 1931.

Furthermore, a different plan to make use of the three hospitals at Hiroo, Otsuka and Okubo, and an isolation hospital at Honjo for contagious disease, was formulated, the undertaking to be carried out at an estimated cost of 2,175,543 yen from the fiscal year of 1925 to the fiscal year of 1930. Each of the above hospitals was to have rooms to take care of 100 patients.

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A detailed explanation of these five Municipal Hospitals is as follows:

Name	Building site	Kind of structure	Building expenditure
Hiroo . . . . .	8,198.85 sq. m.	Reinforced concrete	¥588,528.15
Okubo . . . . .	4,604.96	” ”	289,394.94
Otsuka . . . . .	6,261.59	” ”	432,820.77
Fukagawa . . . . .	2,295.37	” ”	208,600.95
Komagome . . . . .	4,948.73	” ”	350,950.59



# PUBLIC SANITATION WORKS OF TOKYO MUNICIPALITY



## EXPLANATION :

### Municipal Hospitals :

- Newly Constructed by the Reconstruction Work
- △ Hospitals Improved

### Epidemic Hospitals :

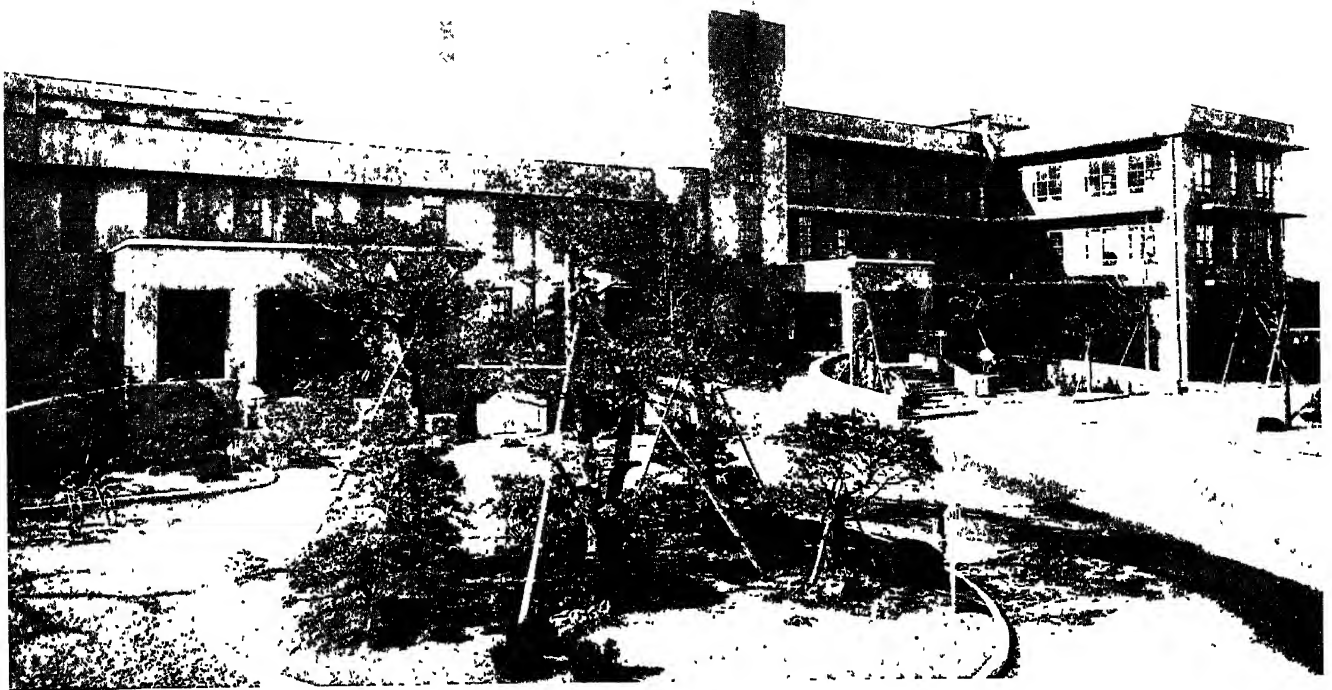
- Old Hospitals
- Newly Constructed by the Reconstruction Work

### Disinfection Stations :

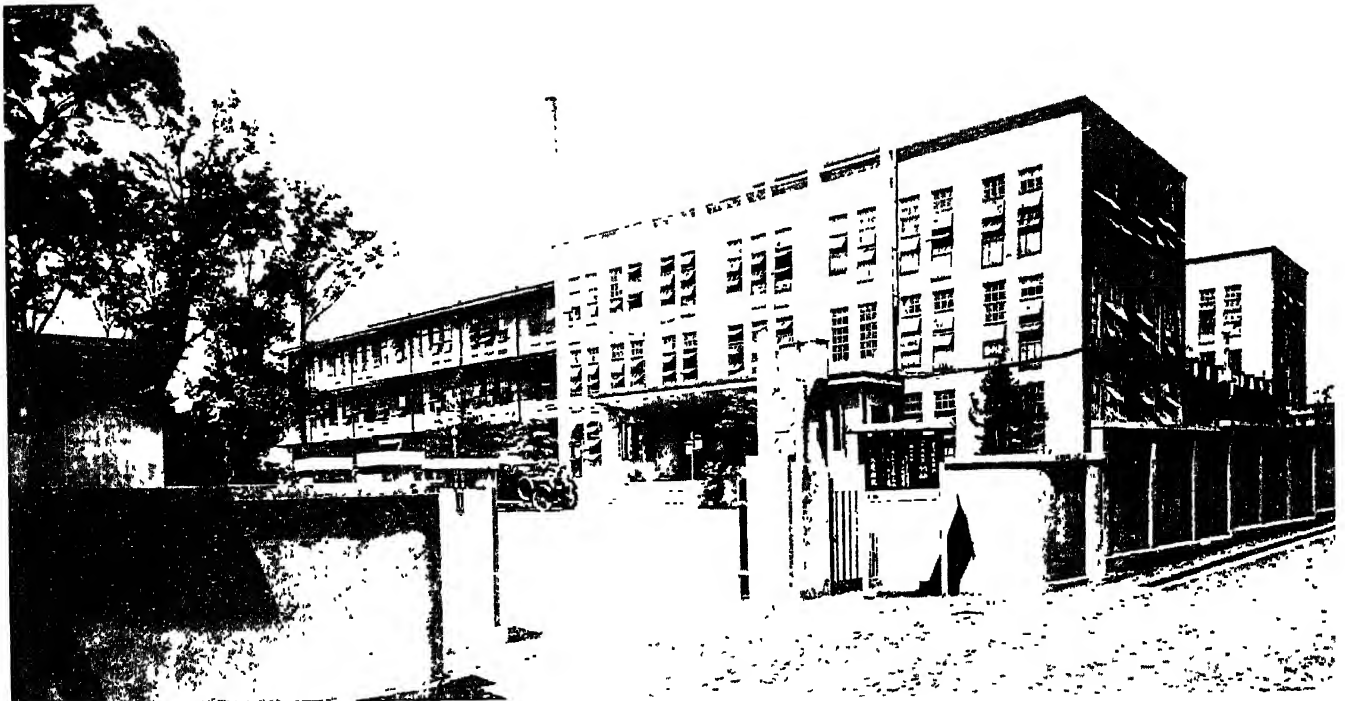
- Main Station
- ▲ Branch Stations
- Municipal Isolation Hospitals
- Municipal Hygiene Laboratory
- Fraternity Hospital







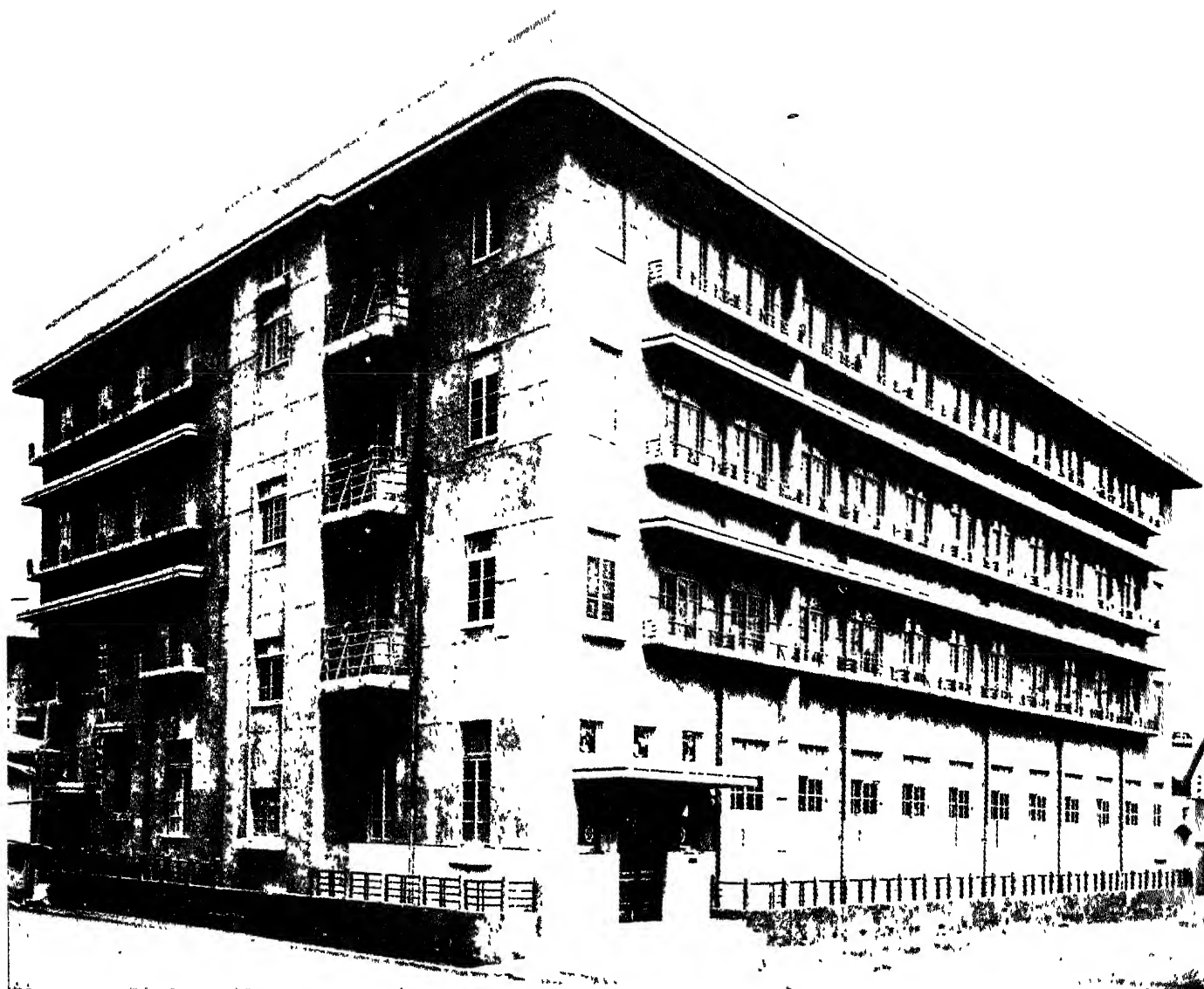
**Komagome Municipal Hospital**



**Okubo Municipal Hospital.**

#### **MUNICIPAL HOSPITALS**

In the pre-disaster period, there existed in Tokyo only one municipal charity hospital, the other establishments of the kind being those maintained by individuals or public bodies. No connection existed between those hospitals, nor were their equipment and arrangements satisfactory. The municipal hospital and most of the other establishments having been destroyed in the disaster, the Municipality, besides reconstructing the lost establishment, erected five charity hospitals in different parts of the city. These new hospitals are all reinforced steel and concrete structures, each with a building area of over 3,305.80 square metres, and 200 beds on the average. Necessary medical arrangements are provided for the treatment of out-patients, the number of out-patients treated in a day being limited to 1,000. Of this figure, 300 patients are given free treatment while the remaining 700 patients have to pay the actual cost, viz., of medicines, fees for operation, etc. In-patients are also classified into those allowed free treatment and those having to pay only actual costs.



A "cheap lodging house"

#### SOCIAL WORKS

The expansion and development of cities and towns in recent years have considerably added to the gravity of social problems in urban districts. Especially after the World War the province of social problems in the cities and towns in this country has been enlarged, and has come to assume greater proportions; and, above all, the social problems in Tokyo are of particular significance, inasmuch as Tokyo is the centre of politics, culture and learning as the capital of the Empire; and, moreover an important commercial and industrial centre. In 1920 the Municipality created a Social Department in the municipal office as an organ to control various affairs relating to social work; and efforts were made by the authorities concerned for the promotion of necessary social provisions. All those provision and establishments having been, however, destroyed or damaged in the great seismic disaster, the Municipality has taken proper measures for the restoration of those important arrangements, and also decided to carry out in enlarged scope the creation of new provisions in this line as an item of the Reconstruction Plan.

# CHAPTER XI

## Social Welfare Works

### SECTION I

#### OUTLINE

More than half of the equipment for social welfare undertakings managed by the City of Tokyo were destroyed by the Great Earthquake. As a consequence, emergency measures were taken to reorganize the various facilities with funds granted by the Department of Home Affairs, Post-Earthquake Welfare Fund, Trust Fund and other donations. Thus, plans were formulated to re-establish employment agencies, crèches and advisory offices for children's health, public dining halls, cheap lodging houses, city pawnshops, public bath houses, etc. These were to be included in the Capital Reconstruction Program for which approval was obtained from the City Assembly in March of 1924. The total estimated cost of the project was 4,525,000 yen, and was to be carried out under a five-year plan from the fiscal year of 1924 to the fiscal year of 1928. Later, however, the time of undertaking was extended to the fiscal year of 1930, with changes in the original plan and revision in the original estimate, as shown in the following table:

Kinds	Estimate in yen	Number of establishments	Building construction	Area of construction
Employment Agencies . . . . .	¥424,050	13	reinforced concrete	3,441.32 sq. m.
Crèches and Advisory Offices				
for Children's Health . . . . .	960,740	14	"	6,208.26
Women's Work Houses . . . . .	544,100	6	"	2,809.91
Public Dining Halls . . . . .	463,510	10	"	3,319.00
Cheap Lodging Houses . . . . .	1,406,780	12	"	12,386.77
City Pawnshops . . . . .	152,250	7	"	915.70
Public Bath Houses . . . . .	111,684	3	"	793.38
Training Office . . . . .	149,000	1	"	826.44
Cost of Design and Supervision .	312,886			
Total . . . . .	4,525,000	66	"	30,700.78

Note: After the approval of the above plans, the construction of two lodging houses and one bath house was suspended, while the work on two crèches and advisory offices for children's health, one women's work house and three dining halls was carried out.

## SECTION II

### PROGRESS OF CONSTRUCTION

Employment Agencies—Of the nine employment agencies, only three survived the earthquake; consequently emergency measures were taken to establish 17 temporary offices to meet the needs of employment, thus making 20 offices in all.

The original reconstruction program was first to rebuild or construct 15 employment offices and include two of the three offices which were saved from the fire, and start the employment work with 17 offices. These offices were to help find jobs for laborers, male and female, boys and girls, salarymen and artisans. Besides, they were to look after other matters directly connected with employment offices, such as the question of capital for workers, the question of undertaking expenses for laborers, loans for traveling expenses of laborers, mental test for youngsters, personal information bureau, special training for work, etc. However, changes were later made in the original plans as a result of which it was decided to establish only 13 offices.

Crèches and Advisory Offices for Children's Health—The purpose of this undertaking was to help families with small incomes by taking care of their children during the day time while the parents attend to their regular daily work. The children handled by these chéches were limited to those under school age and infants more than six months old. Besides taking care of children, the crèches supplied various important information regarding children and their bringing-up, and helped to increase and guide the knowledge of the general public regarding the child problem.

Before the Great Earthquake, there were only two crèches in Tokyo, one each in Honjo and Fukagawa wards, but these were destroyed in the Great Earthquake. Realizing the necessity of crèches more than ever, after the great disaster, the two crèches in the above-mentioned wards were reconstructed and eight other institutions established within the city with the money granted for such post-earthquake welfare work at an estimated cost of 75,000 yen.

The first Advisory Office for Children's Health was opened in the City of Tokyo in June of 1923, and the number was later increased to three. However, these were all destroyed in the earthquake and fire of 1923. Afterwards five new offices were established. Besides the above, 14 more were established as part of the reconstruction program, each with a capacity for handling an average of 80 children a day. All the buildings were of reinforced concrete, with an athletic ground and an amusement room for teaching children songs, plays, interesting stories, etc. Rooms for taking care of babies, and a health

# SOCIAL WORKS OF TOKYO MUNICIPALITY



## EXPLANATION.

- |  |                        |
|--|------------------------|
| ○ Employment Agencies                                | △ Cheap Lodging Houses |
| △ Creches and Advisory Offices for Children's Health | △ City Pawnshops       |
| △ Women's Work Houses                                | △ Public Bath Houses   |
| ○ Public Dining Halls                                | △ Training Office      |





information office, were likewise established within the *crèches*.

**Women's Workhouses**—The main purpose of this undertaking was to give help to unfortunate women and poor families by teaching them of sewing and handicraft, so that they could earn money to support their family. First, they took lessons at the workhouses but later, according to desire of individuals, the work could be taken and done at home. For this purpose the City of Tokyo supplied materials and paid a specified sum of money for certain finished products, and thus promoted the welfare of poor families.

Prior to the Great Earthquake of 1923, there was only one such workhouse which was established within the employment building in Asakusa ward. Aid was afforded on an extremely small scale and proved of help only to the poorest families, the work being limited to production of paper boxes. When the earthquake came, this was destroyed, and as a reconstruction undertaking, five were reestablished while one was newly created. Besides the construction of five with an entirely new building was accomplished on a budget of 175,000 yen granted by the Department of Home Affairs and the various Post-Earthquake Welfare Associations.

**Public Dining Halls**—Public dining halls were introduced before the Great Earthquake in order to help citizens of extremely small incomes. At the time of the disaster, there were two such dining halls, and preparations were being made to establish five others. These however were all destroyed except the one already in operation. As part of the Reconstruction Program, 10 new dining halls were established. Besides the halls operated by the city, five other establishments were erected with 250,000 yen granted by the Department of Home Affairs. The 10 new halls above do not include the one which escaped the Great Earthquake.

**Cheap Lodging Houses**—Cheap lodging houses were established for the purpose of helping laborers of small means and men leading a bachelor life, by supplying them with living quarters so that they could have enough rest and maintain their health. With this idea in mind, a lodging house was first established within Asakusa and Shiba Employment Agencies. However, owing to changed conditions it became necessary to separate the cheap lodging houses by themselves. Thus, the first separate lodging house was established in Honjo ward in 1922. Following which the Fukagawa cheap lodging house was established in September of 1923 when the Great Earthquake occurred. The former was completely burned while the latter was severely damaged. As an emergency relief program, eleven temporary cheap lodging houses were established in the barracks donated by Osaka Prefecture. With the completion of the reconstruction program, all these temporary buildings were removed, with the exception of one. As part of the reconstruction program the Fuka-



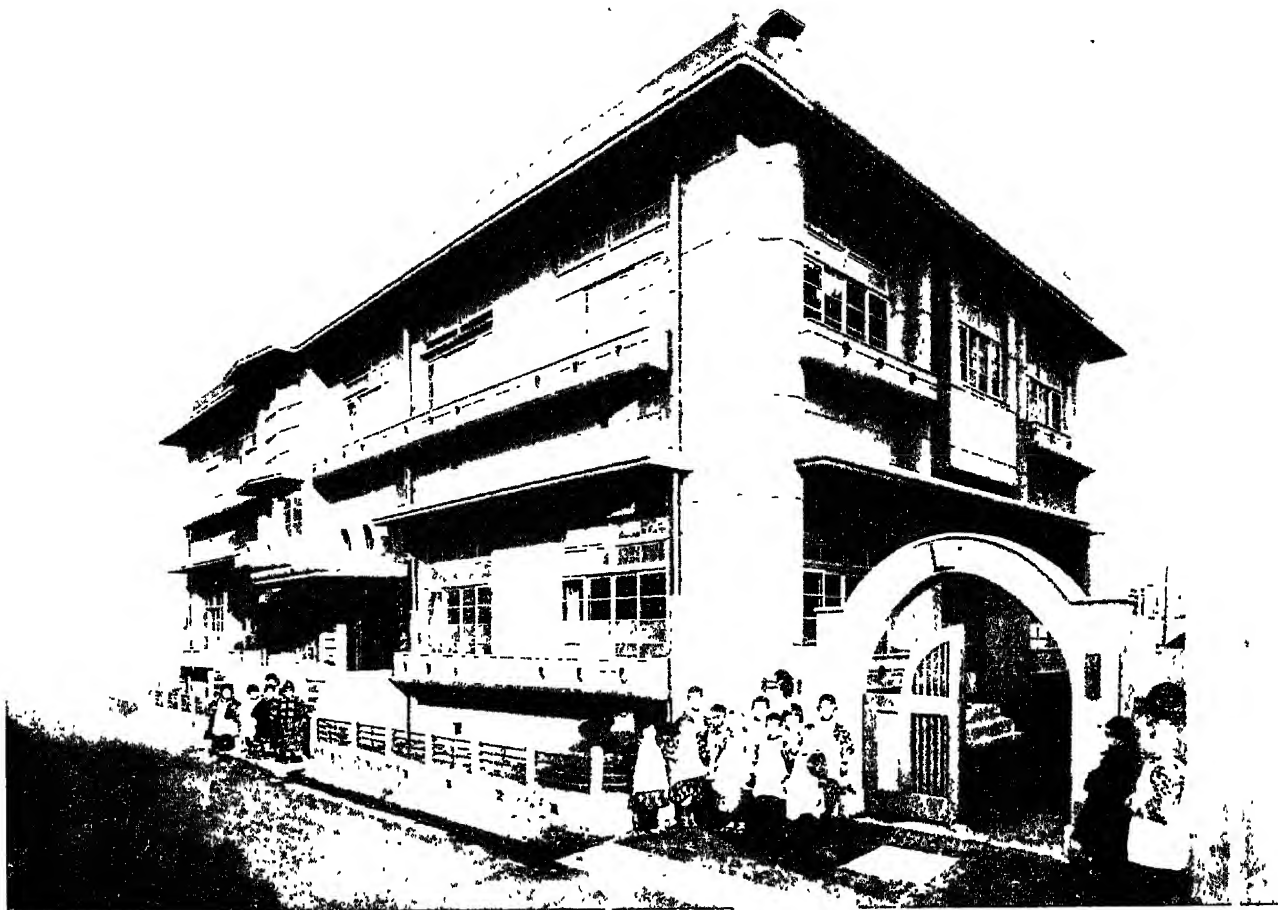
gawa cheap lodging house and one other establishment were repaired or reconstructed, while nine new houses were erected, thus making eleven in all. The average accommodation in each of the cheap lodging houses is for 200 persons.

**City Pawnshops**—One of the main purposes of the pawnshops managed by the City is to serve as financial organs for the mass of the citizens, but especially to those with extremely small incomes: They grant small loans at a low rate of interest and under their conditions. This undertaking became suddenly important after the Great Earthquake when financial organs were completely disrupted and the lower classes were placed in an extremely difficult situation. As an emergency measure to relieve such conditions, five pawnshops were established in Asakusa and other places with money donated by the Post-Earthquake Welfare Association. As part of the regular reconstruction program the above five establishments were reconstructed and two pawnshops newly created. Furthermore, with the 620,000 yen Earthquake Relief Fund granted by the Department of Home Affairs, eleven other pawnshops were newly built. Thus, there are now 18 pawnshops under Municipal auspices within the City of Tokyo.

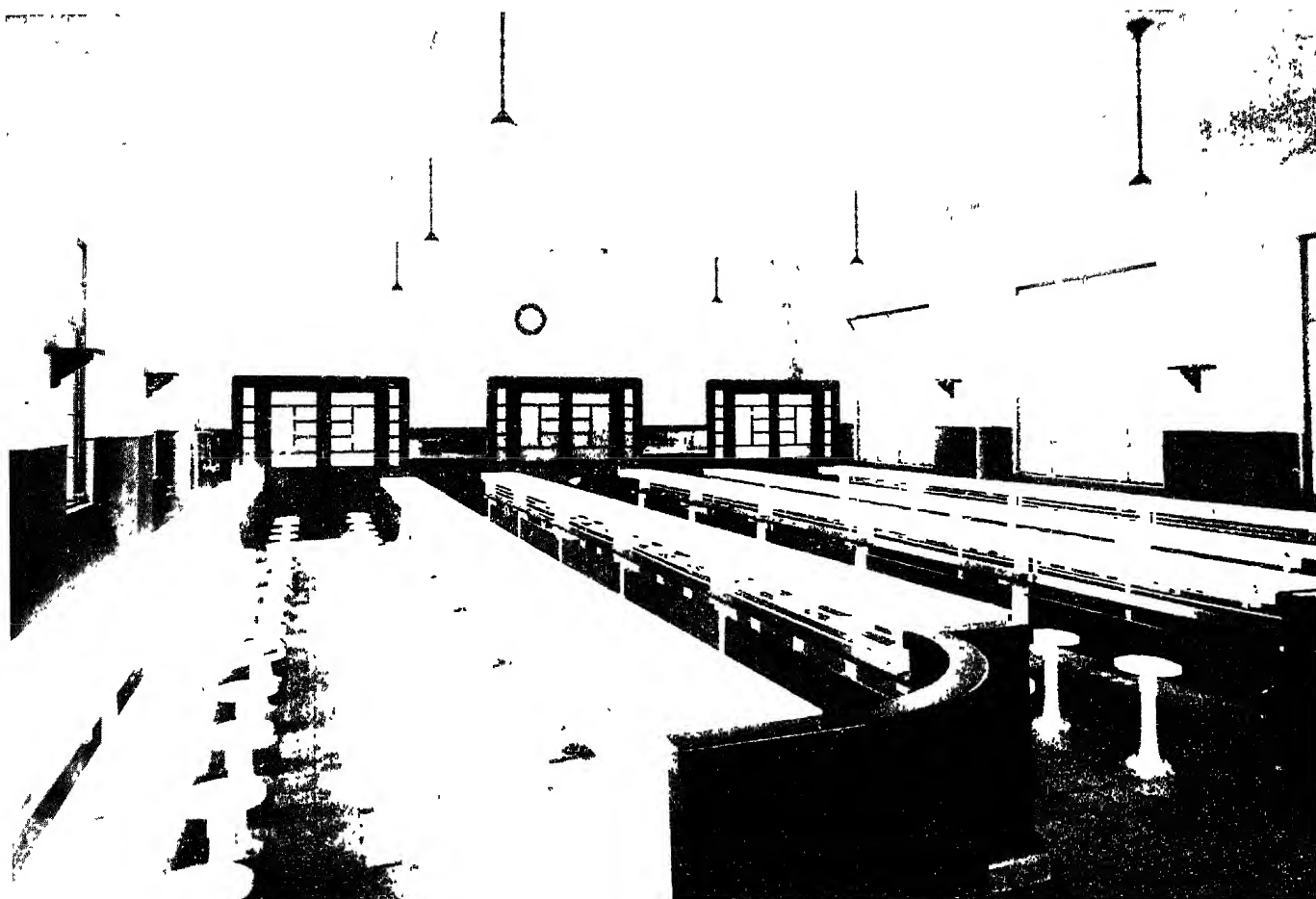
**Public Bath Houses**—In view of the fact that owners of bath houses were hit extremely hard by the earthquake and made little economic progress, the city established 29 temporary bath houses, taking into consideration the health of the citizens. Afterwards with the recovery made by bath-house owners in general, the municipal bath houses were gradually closed.

Later, a plan to operate 10 bath houses was formulated, but in view of the remarkable progress made by private bath-house owners throughout the city, this proposal was changed, due to the fact that there was no need for such a large number, and it was decided to build only two bath houses.

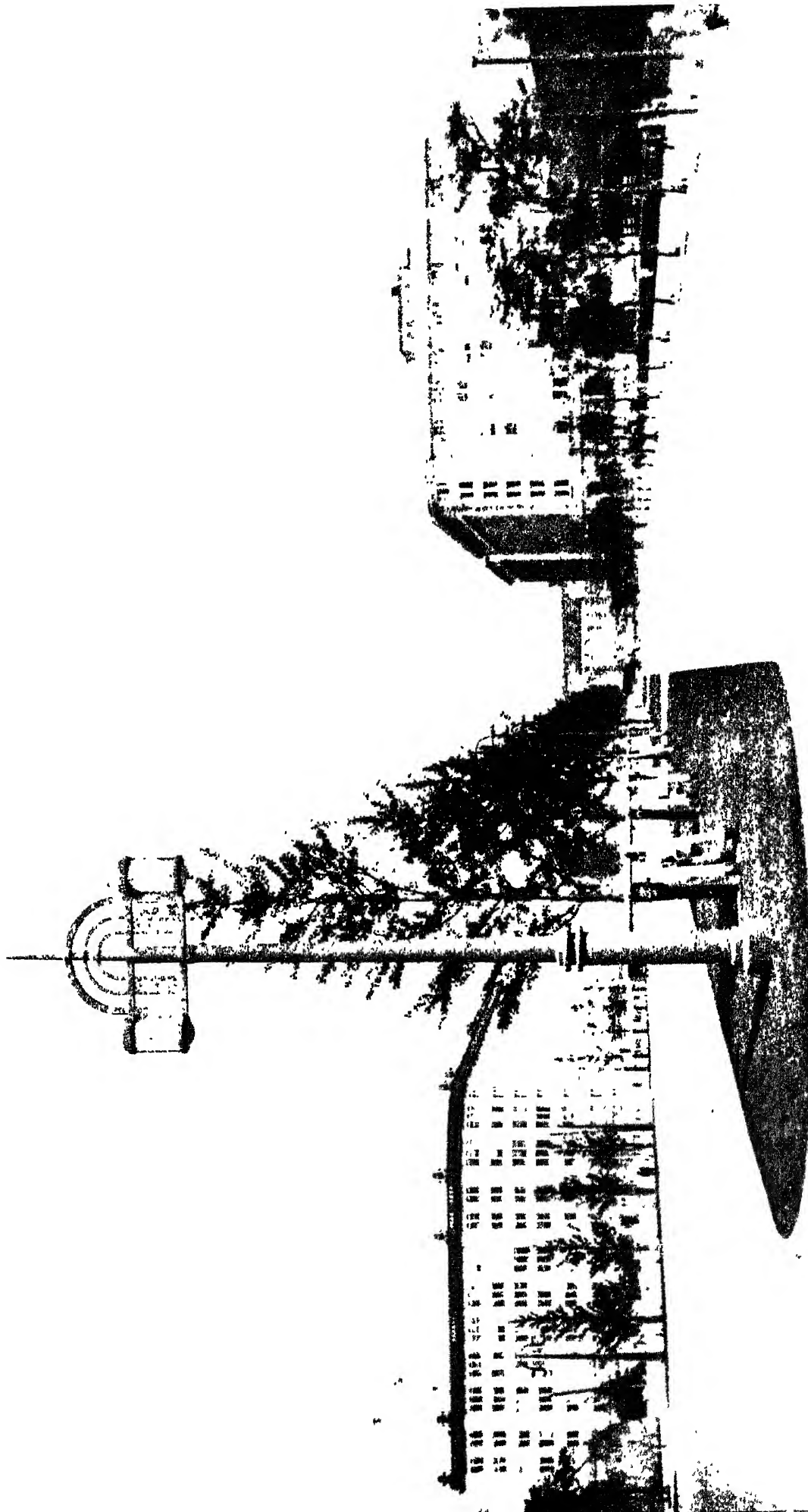
**Training Office**—In view of the rapid increase in unemployment among the educated classes due to continued depression in financial circles, it became necessary to establish special training quarters to help these. The purpose of this office was to act as a medium and get special work from Government offices and private companies, the work being limited to such tasks as writing, translation, preparing advertisements, drawing maps, etc. The sponsors of this undertaking tried to make the best possible use of the intelligent unemployed, for which purpose an office was specially opened.



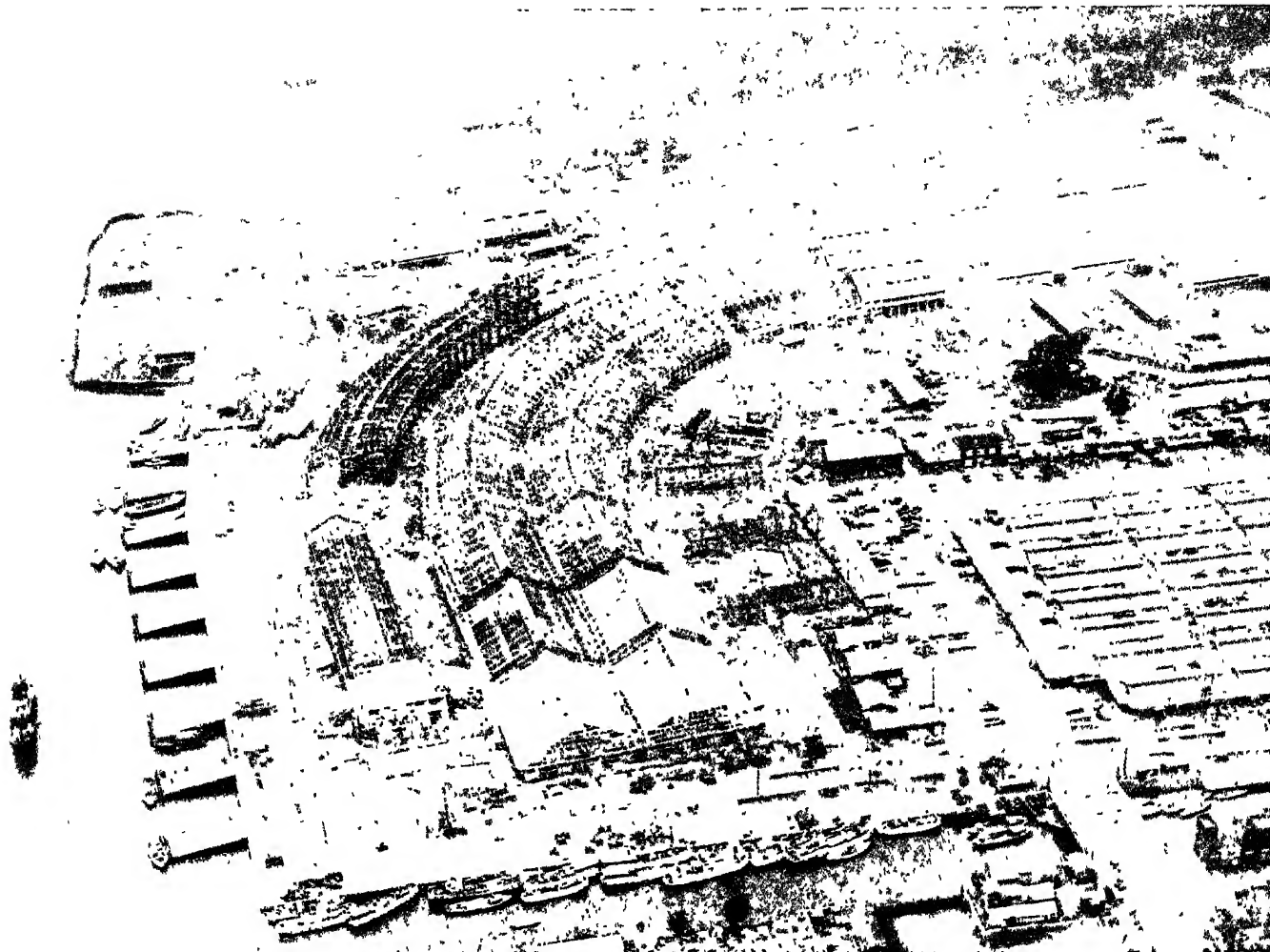
A newly built crèche



Interior of a Public Dining Hall



"Gyoko Doro," the widest road in the Capital



Air view of the Central Wholesale Market under construction at the mouth of Sumida River

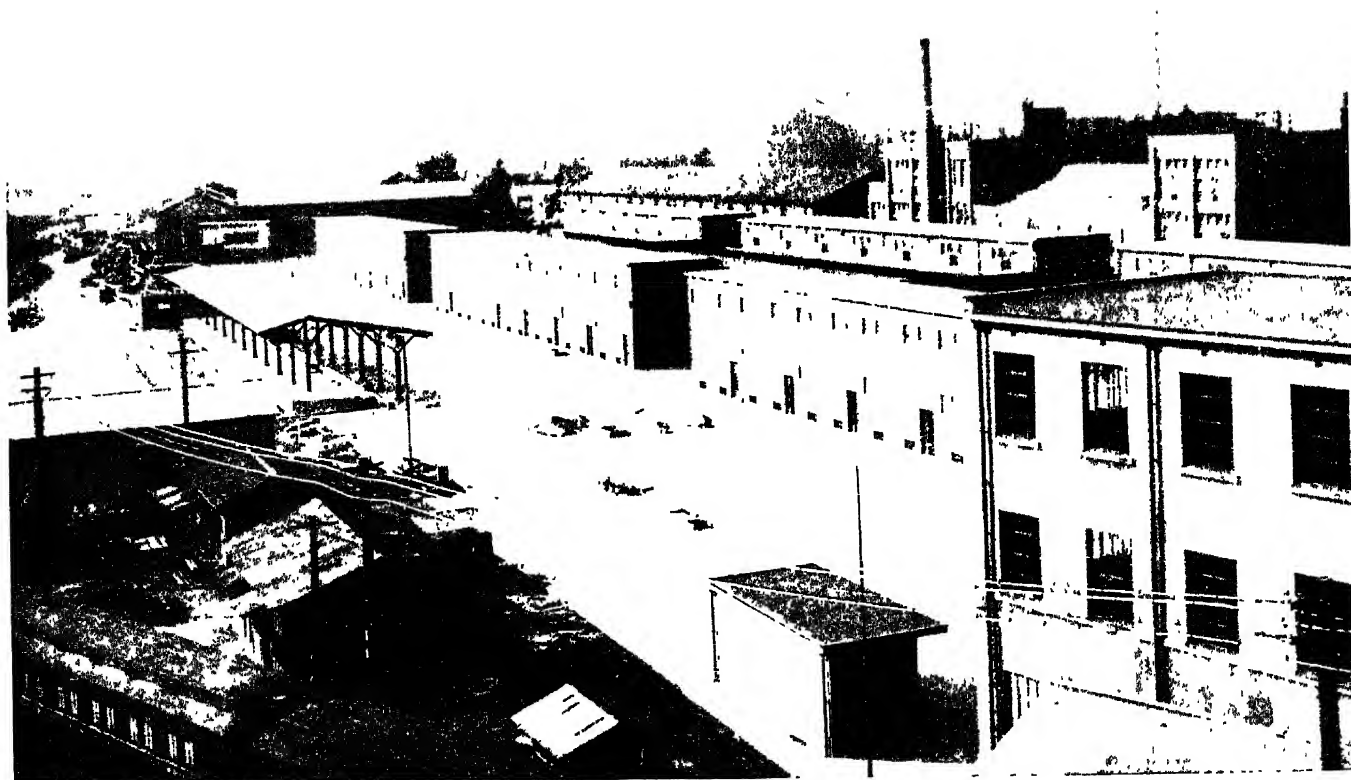
### THE CENTRAL WHOLESALE MARKET

As the many private markets that existed in the city were destroyed in the conflagration, the authorities opened soon after the disaster a number of temporary retail markets in various quarters of the city as organs for supply of daily necessities, and at the same time established in Honjo ward a municipal wholesale market for the supply of fruits and vegetables, combining 5 private vegetable markets which had existed in the same ward. This wholesale market is now the central organ for transactions in fruits and vegetables in the south-eastern section of the city. The fish market at Nihonbashi, which had existed there since the Tokugawa period as the only centre of fish supply, having been also destroyed in the disaster, the authorities ordered its removal to Tsukiji, to a place selected at the seat of a central wholesale market established by the Municipality. On completion of the removal, a municipal fish market store was established as the first step in the establishment of a large central wholesale market.

Under the Reconstruction Plan, the municipal authorities have decided to effect a fundamental reform in the former system of private markets, and to establish a system of central wholesale markets for the supply of foodstuffs of daily use, mainly fish, poultry and meat, fruits (raw), eggs, etc.



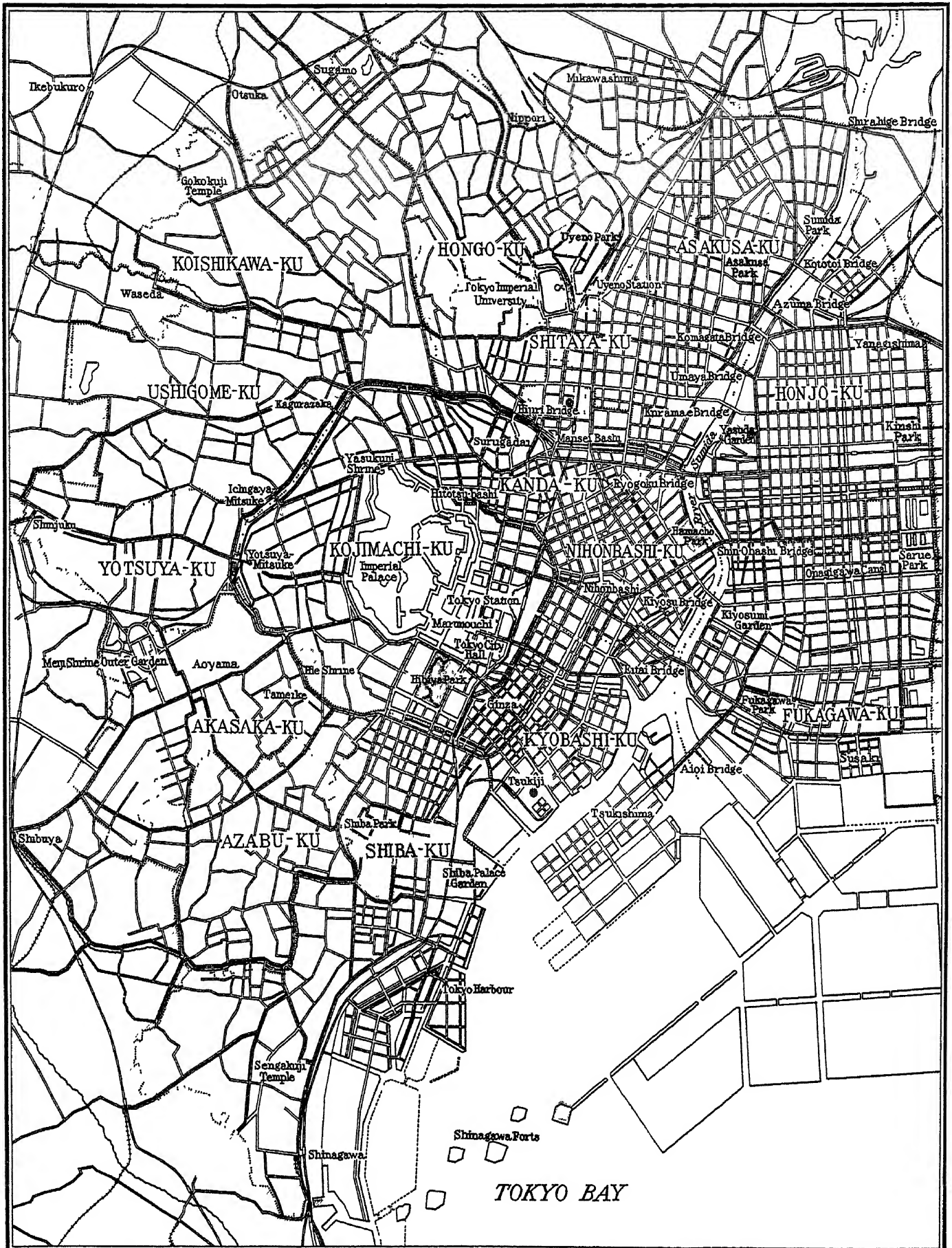
Kanda Wholesale Branch Market, Kanda ward



Koto Wholesale Branch Market, Honjo ward



# TOKYO MUNICIPAL MARKETS



## EXPLANATION :

● Municipal Wholesale Markets

• Municipal Retail Markets





# CHAPTER XII

## Construction of Central Wholesale Market

### SECTION I

#### OUTLINE

A wholesale distribution system was started in the City of Tokyo to supply the necessities of daily life, evenly and at a fair price. The main idea was to promote the welfare of both the consumer and the supplier, so as to stabilize living conditions. Thus, the central wholesale market was constructed at 4-chome Tsukiji, Kyobashi ward, at an estimated cost of 15,000,000 yen under a consecutive plan from the fiscal year of 1924 to the fiscal year of 1931. Besides the above central market, two wholesale branch markets were established in Kanda and Koto under a seven-year plan from the fiscal year of 1924 to the fiscal year of 1930. The estimated cost of these markets was 6,400,000 yen to be paid out of the special budget outside of the Capital Reconstruction Fund.

### SECTION II

#### MAIN MARKET AT TSUKIJI

As it goes without saying that the location of a market will have much to do with its efficiency, special consideration and care were given for selecting a site for the central market. For this purpose the past and the future problems of distribution were carefully weighed, while the question of transportation facilities, both by sea and land, was also given serious thought. And, as a consequence, it was decided to build the central wholesale market at No. 1, 5-chome Tsukiji, Kyobashi ward. This location was thought to be ideal, being close to the mouth of Sumida River and also near the Shiodome Station.

As a market to handle fish, meat, poultry, eggs, vegetables and fruits, the Tsukiji Central Market is extremely convenient, having an incoming line of about one mile from Shiodome Station, not to mention the special transportation facilities on the Sumida River. These facilities include a 107.27 metres shore-line moorings for fishing vessels, a 109.09 metres side pier, one floating pier and nine end piers. With the Kanda and Koto branch markets, there are adequate facilities to demonstrate its efficiency. The structures within the compound are either reinforced concrete or steel-framed, with a market for

wholesalers, a market for middlemen, cold storage, warehouses, banana fermenting room, buyers' storage room, etc. Besides the above, there are stores, dining room, depôt for trucks and carts, Central Wholesale Market offices, offices for various associations, police box, post-office and branch banks, etc., within the main building. Special facilities in regard to water-works and drainage systems have also been installed, while roads leading to and within the market have been paved to permit easy transportation. Also, there is a place for cleaning fish as well as a place for disposing of refuse. Work can also be carried on in the night time by means of special lighting installations which make this Central Wholesale Market an ideal distributing centre.

The cost of the Central Market is detailed as follows:

Total cost .....	¥15,000,000
Land .....	8,389,351
Buildings .....	3,648,775
Equipment .....	2,088,787
Design and Supervision .....	873,087

### SECTION III

#### KANDA AND KOTO BRANCH MARKETS

Kanda Branch Market:

Location—Yamamoto-cho and 4 other places in Kanda ward and also at Neribei-cho, Shitaya ward.

Area—30,862.80 square metres besides the area for an incoming line which totals 2,803.30 square metres.

This wholesale branch market is situated close to Akihabara Station on the Chuo Line, and can be conveniently reached from the Kanda River, a tributary of the Sumida River. With the closing of Iidabashi Station on the Chuo Line in the near future, the Kanda Branch Market will become an ideal distributing place for freight.

The building construction is reinforced concrete or steel-framed, and has a through road the centre of the market. To the south and north of the markets there are depôts for carts and motor trucks, while around the market are stores and buyers' storage rooms and other necessary installations and equipments. To the north-east of the central part of the market square is the main building. Within this building is a market for wholesalers, and the official quarters of the marketing people, as well as a dining room. Around this building are situated the markets for middlemen. Furthermore, on the side facing

the Kanda River are installed moorings and freight sheds, while on the other side is direct means of transportation from the Akihabara Station. Thus, as a wholesale market, it has equipments and facilities sufficient for demonstrating a high degree of efficiency.

Koto Branch Market:

Location—Yokoami-cho, Honjo Ward.

Area—17,851.23 square metres.

The Koto Wholesale Branch Market is bounded on the east by a 25 metre road, the Kamezawa-cho road with tram-cars running on it, while on the west is the Koto Ice Manufacturing plant. A 15 metres road runs from one corner of this side to the roadway which passes along the shores of the Sumida River. On the south is Ryogokubashi Station which can be reached by crossing the 28 metres creek connected with the Sumida River. Adjacent to the north side of the market are open spaces belonging to the Department of Communications and the Honjo Higher Primary School.

In the main, freight movement, both incoming and outgoing, to the neighboring areas is transported along the roads east and west of the market, while freight, to and from the outlying districts is handled mostly through the spur railway line from Ryogokubashi Station and the creek connecting with the Sumida River. Thus, as a distributing point, the Koto Market is situated in an ideal spot having excellent transportation facilities by both water and land.

Like the Kanda Branch market, the construction of the market structures is mostly reinforced concrete, with a part steel-framed. In the central part of the location is the wholesale market, and on the east is the main building housing the market offices, offices for the market operators and a dining hall.

In the west corner of the locality is situated the cleaning quarter because of its easy access to the creek for drainage purposes. A freight shed is built adjacent to the short line from Ryogokubashi Station while landing places have been erected on the Sumida River bank and mooring in the canal to facilitate handling of freight by both land and water.

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# CHAPTER XIII

## Arrangements for Electric Enterprises

### SECTION I

#### OUTLINE

Of the various electric enterprises, the electric tramway industry is a monopoly of the City of Tokyo. With the electric power supply industry, it was purchased from the Tokyo Railway Company Limited in the 44th year of Meiji (1911). Under direct management of the City, the railway line was greatly expanded and improved. Just before the Great Earthquake, it measured 190.77 miles, while the number of cars and carriages totalled 1,855. Car sheds and equipment for transformer stations were likewise increased.

According to an investigation and survey covering the period up to the end of 1922, the average number of people using the tramcar service daily was estimated at 1,314,253. However, the entire system suffered untold damage in the Great Earthquake. Besides the destruction by fire of the main building of the Electric Department and attached structures, the Department lost 719 cars and five car sheds. Losses and damages to transformer stations and power stations totalled 18 places, while the length of the destroyed car lines reached 9,532 miles. All these and attendant equipment had to be reconstructed and repaired, for which a special electric tramway budget of 37,980,000 yen was drawn up. Work of reconstruction was to have been started under a three-year consecutive plan from 1924 to 1926. However, after taking into consideration the actual state of the Capital Reconstruction program and the future of the tramway industry, the budget was revised to 27,900,000 yen in March of 1927 and work was extended to 1935. This plan was further changed in March of 1930, so that the budget now reads 23,560,000 yen. However, the period of undertaking was shortened, so as to complete the work by 1931.

Besides the above undertaking, a second plan to be carried out in conjunction with the reconstruction and remodelling streets and the land readjustment system, was formulated. This plan was for the purpose of latering and improving the tracks and the tramcar lines. The estimated amount of expenditure was 29,000,000 yen, and work was to have been undertaken from the fiscal year of 1926 to the fiscal year of 1932 under a seven-year consecutive plan.

# TOKYO MUNICIPAL ELECTRIC SYSTEM



## EXPLANATION

— Electric Tramway Lines

● Steam Power Plants

--- Electricity Supplying Routes

○ Secondary Substations

▬ Primary Substations



Next, in regard to the question of electric supply, power was supplied within the City and its suburbs by the Electric Department under special agreement with the Tokyo Electric Light Company, Limited. Except for special places within the city where it was necessary to install auxiliary lines, practically all wires were placed underground, and the company supplied power to approximately two-fifths of the total number of consumers. Before the Great Earthquake, the number of households using electric light totalled 130,500, with electric bulbs aggregating 720,910. The number of buildings supplied with electric power totalled 2,940, aggregating 26,390 kilowatt hours.

Because of the fact that most of the districts supplied with power from Tokyo City were mainly confined to the Yamanote Area where the damage caused by the earthquake was comparatively slight, losses sustained by the City Electric Department were likewise comparatively small. The principal losses suffered by the Department were as follows: 2,267 electric light auxiliary lines, 51 electric power auxiliary lines, 41 miles of electric lines, 154,792 electric bulbs, and electric power totalling 9,100 kilowatt hours, as well as other equipments and installations, and buildings, etc. The estimated amount of the damage sustained totalled more than 2,254,000 yen which is approximately 12 percent of the entire capital outlay.

For the reconstruction program, a budget of 2,520,000 yen was drawn up, as an electric supply reconstruction fund, to rebuild and renovate the equipment damaged by the Earthquake. This undertaking was to have been carried out under a two-year consecutive plan in the fiscal years of 1924–25–26. However, in view of its relation with the land readjustment system and other related undertakings, the plan for carrying out the above project was revised to start from the fiscal year of 1924 and to be completed in four years by the fiscal year of 1927. The remaining construction work was to have been completed by the fiscal year of 1931 in relation with other undertakings.

Besides the above mentioned project, there was formulated a second plan for the improvement of electric supply equipments, which was to have been undertaken in relation with other plans calling for construction of new streets and improvement of old ones, and readjustment of land plots. An approximation of 1,840,000 yen was budgeted and the undertaking was to have been carried out under a three-year plan from the fiscal year of 1926 to the fiscal year of 1928. However, in view of its connection with other reconstruction works, the project failed to make the expected progress, and the period of execution was prolonged two years to the fiscal year of 1930. If there were any part of the program still unfinished by that time, it was to be completed the following year within the limits of the original appropriation.



# THE RECONSTRUCTION OF TOKYO

## SECTION II

### ARRANGEMENTS FOR ELECTRIC TRAMWAYS AND SUPPLY OF ELECTRICITY

#### Electric Power Supply Reconstruction Fund for Tramway Enterprise and Reconstruction of Buildings and Structures:

Generating station . . . . .	1 place
Transmission station . . . . .	12 places
Car sheds . . . . .	9 places
Workshops and warehouses . . . . .	5 places
Branch offices and others . . . . .	26 places
Electric research laboratory . . . . .	1 place

#### Vehicles:

New construction (freight) . . . . .	50 cars
Reconstruction (passengers) . . . . .	390 cars
Installation of New Machinery and Equipments . . . . .	12 places

#### Construction of New Tram Lines:

Loop line and others . . . . .	789 metres
Junction and branch lines . . . . .	2 places

#### Improvement to Tram lines:

Sidings and Changes in Position . . . . .	2,046 metres
Over bridges . . . . .	4 places

#### Reconstructing Tram lines:

Straight lines . . . . .	51,291 metres
Side-tracks . . . . .	156 metres
Branch lines . . . . .	17 places
Workshops and car sheds . . . . .	17,315 metres
In connection with reconstructing bridges . . . . .	22 places

#### Construction of new Electric lines:

Loop line and others . . . . .	1,585 metres
Junction and branch lines . . . . .	1 place

#### Improvement to Electric lines:

Side-tracks and electric tram lines . . . . .	8 places
Underground lines . . . . .	4 places

## ARRANGEMENTS FOR ELECTRIC ENTERPRISES

### Reconstruction of Electric lines:

Underground lines . . . . .	51,802 metres
In connection with reconstructing bridges . . . . .	30 places
In connection with building of generating stations . . . . .	16 places

### Second Reconstruction Plan for Tramway Enterprise:

Construction of New Tramway . . . . .	18,541 metres
Changing position of Tramway . . . . .	125,311 metres
Restoration of Tramway in relation with reconsrtuction of bridges . . . . .	1 place
Construction of new electric lines. . . . .	18,541 metres
Changing position of electric lines. . . . .	125,826 metres
Restoration of electric lines in relation with reconstruc- tion of bridges . . . . .	2 places
Installation of new machines and equipment . . . . .	3 cases

### Details of Electric Supply Industry Carried out with Recon- struction funds:

Construction of new buildings . . . . .	3 places
Restoration of old structures . . . . .	10 places
High and low pressure underground lines . . . . .	158,899 metres
In-coming lines . . . . .	15,258 metres

### Other works such as construction of transmission station and etc. Details of Electric Supply Industry carried out with Second Reconstruction funds:

High and low pressure underground lines . . . . .	63,612 metres
Removal and closing of underground lines . . . . .	169,624 metres
Aerial line . . . . .	108,804 metres
Removal and clearance of in-coming lines . . . . .	52,672 metres
High pressure towers . . . . .	115 places
Distributing boxes . . . . .	86 "

# CHAPTER XIV

## Undertaking Pertaining to Reconstruction

### SECTION I

#### READJUSTMENT OF UNDERGROUND INSTALLATIONS AND OTHER CONSTRUCTIONS

Before the Great Earthquake of 1923 there were in the City of Tokyo numerous underground installations and other constructions, as shown in the following table:

Kinds	Length of Aerial lines	Length of Underground lines
Within Tokyo		
City . . . . .	16,590,716.36 metres	17,005,554.54 metres
In the area destroyed by the earthquake fire . . . . .	9,168,472.72	7,934,763.63
Needing readjustment due to land readjustment system . . . .	5,239,454.54	4,025,769.09

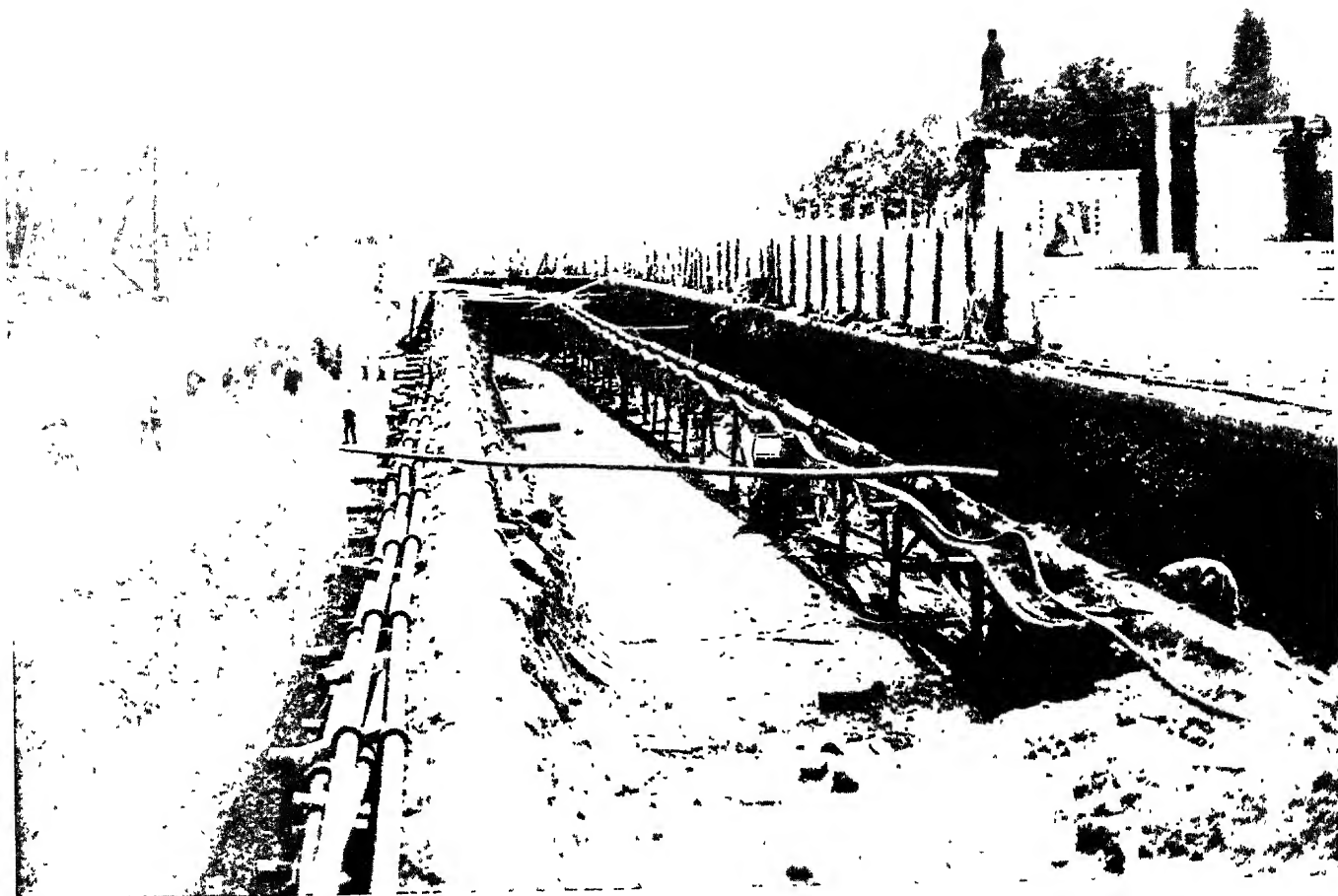
In regard to readjustment of underground lines and other such related matters, which had to be carried out in conjunction with the land readjustment system, it presented one of the most complicated problems in the program of Capital Reconstruction. This was due to the fact that there were many works of a similar nature, and the many diverse ways in which the various undertakings were to be carried out. Thus, in the removal of buildings, there was the need of readjusting the waterworks, lighting system, electric and heating systems and gas and other such inside equipments, while outside problems such as streets and bridges, likewise, had to be taken into consideration. In some cases, these were to be abolished, in others reconstructed or newly constructed not to mention those which were to be expanded.

And to make matters still more complicated the relative progress and speed of various constructions and undertakings had to be fully considered so that reconstruction could be carried out smoothly.

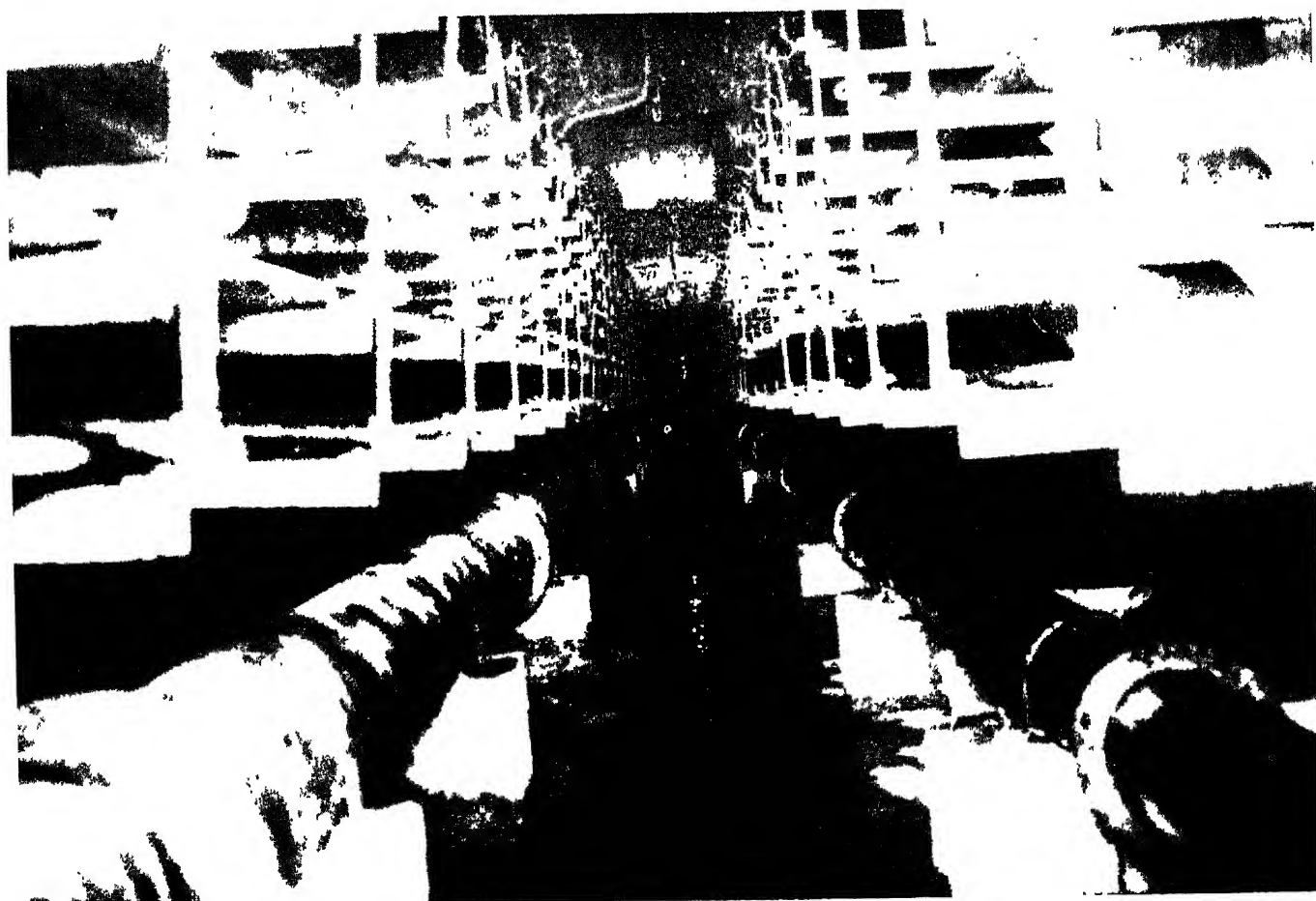
For the above reasons, which required the highest degree of specialization in proper readjustment of the whole undertaking, a plan was advanced to undertake the reconstruction of Tokyo under entirely Government auspices. This plan, however, was dropped owing to difficulty in obtaining such a huge



Nihon-bashi Bridge in the evening



The engineering work of adjusting underground structures at Kudan Road



The mains of water, gas, electricity and telephone, etc., in the form of system, at the underground of Kudan Road

appropriation, and to other objections. Consequently, measures were evolved to carry out reconstruction under separate plans, the Government to reconstruct and rebuild Government offices and other Government undertakings, while the City of Tokyo was to look after those enterprises which were under control or management of the city.

The reason why the latter plan was chosen was that the work of reconstruction and readjustment in the main could be most profitably and conveniently carried out in this way. While the work of land readjustment system and the construction of the roads and bridges were being carried out as a nucleus of the reconstruction work, the readjustment of underground installations and other related matters could also be undertaken at the same time. Thus, the National Government undertook the construction of trunk roads, and the readjustment underground equipments related to it, while the city looked after the auxiliary roads and the work of underground construction, which were under its jurisdiction. However, those structures which had special connection with Government offices were reconstructed by the Government. From September of 1925, except for construction of the Department of Communications, the Metropolitan Police Board, and the Imperial Guards Division, all Government enterprises and works were to be undertaken by the State and the City, just as in other general public underground works.

Construction undertaken by the National Government:

1. Construction connected with the Department of Communications, the Metropolitan Police Board, and the Imperial Guard Division within the district under Government jurisdiction.
2. Waterworks system, sewerage, electric light and power, gas and other equipments (excluding auxiliary roads) within the district under Government jurisdiction.
3. Construction of trunk roads and related works mentioned above.
4. Structures and other constructions which hindered constructions within the districts under Government jurisdiction and within auxiliary road limits.

Undertakings carried out by the City:

1. Construction of waterworks, sewerage, electric light and power, gas, etc., (excepting trunk roads) within the districts under jurisdiction of the City.
2. Construction of auxiliary roads and related works mentioned above.
3. Different kinds of structures obstructing buildings within the trunk roads in the districts under jurisdiction of the City.

4. Expenses borne by the City in case of removing public telephones a second time (expenses for removing telephones for the first time are all undertaken by the Government).

In the readjustment of underground installations and other such related equipments, the following division in the treatment of work was adhered to:

### Readjusting Underground Engineering Works

1. Adjusting principal and branch main systems:

- (a) Combined engineering work,
- (b) Single emergency readjustment engineering work,
- (c) Provisional and permanent readjustment engineering work.

2. Work on private-owned main systems.

1. Readjustment of the principal and branch main systems:

(a) Combined engineering work: When it was found more advantageous or convenient to substitute and lay down a single line or two lines of mains of greater diameter, in place of several lines of water or gas mains, or underground installations and other engineering works existing within an "abolished-road" ground, it was very difficult not only to determine the cost of adjustment in a uniform way, on the basis of the difference in kinds of roads or in the various circumstances attending the removal of the buildings, but the actual treatment of the affairs connected therewith was also extremely complicated and, in consequence, hard to manage, so that thereby the work of readjustment might have been seriously hindered. For these reasons, therefore, it was deemed highly practical that all these subterranean engineering works existing in the same land sector should be grouped together in a single category, according to the kind or class of the enterprise in which the person or persons concerned were engaged; and that, after duly deciding the method of procedure of readjustment, there should be concluded with each of those persons a so-called "readjustment contract," as preliminary to the actual conduct of the adjustment work. As to the cost of readjustment, it may be said that both the State and the City concerned were made to bear their due share of the burden incurred, to be worked out in proportion to the actual amount of the area of residential lands which had come to lose value or utility for the purposes intended, in consequence of the new construction of roads and ways, or of the opening of a canal, or again of the laying out of a public park.

(b) Single emergency readjustment engineering work: The work of readjustment with regard to engineering works, such as telegraph and telephone systems, water-supply arrangements, sewerage systems, electric power and light supply



water-supply arrangements, sewerage systems, electric power and light supply arrangements, gas supply works, and so on,—which were found to offer direct or immediate obstacles in the way of the road making or the removal of buildings, or again in execution of land readjustment,—was handed over, for realization, to the party concerned, beginning with those places where such work was found most necessary or urgent, and gradually extending to other quarters. In this kind of readjustment scheme, the actual expenses incurred were accurately calculated and ascertained as regards a single individual piece of enterprise, and the costs of the work were borne, according to the causes which had necessitated the execution of the undertaking, either by the State or by the City concerned.

(c) The provisional and permanent readjustment work: With regard to the readjustment work occasioned by the presence of telegraph poles or other things on the roadways proving serious obstructions to smooth traffic and communication; or various species of main systems which were likely to offer obstacles to adjusting underground engineering works; or again those engineering structures which stood in special relations,—the work of readjusting all these was given over, for execution, to the party interested, a half or a quarter of the costs of the enterprise being granted by way of subvention. The actual expenditure entailed was to be definitely calculated and ascertained for each single individual piece of readjustment work, and the engineering costs thus ascertained were to be defrayed, according to the causes which necessitated the execution of the work, and also to the work of making roads, either by the State or by the City concerned.

2. The work on the private-owned main systems (sometimes also called “in-door plumbing”):

As to the indoor plumbing for water, electricity and gas supply, as well as the connecting pipe systems, the owner or owners had to present proper demand or request for removal; and removing or transferring was entrusted, for actual execution, to the proper party concerned.

For reference' sake, we describe below, in a tabulated form, some of the principal kinds of underground engineering arrangements and other sorts of installation, which were properly disposed of by the City of Tokyo:

Parties concerned	Principal kinds of engineering work
City Water-Supply Department:	Water-supply mains and appurtenances (gauges, cocks, etc.)
	Private-owned piping (connecting pipes water-taps, various indoor arrangements, etc.)

## THE RECONSTRUCTION OF TOKYO

Sewerage Bureau, in the City Engineering Department:	Sewerage mains and appurtenances (manholes, lamp-holes, washing troughs, pipes provided for the same, etc.)
City Electric Department:	Electric tramway tracks, transmission lines (underground), electric supply lines (underground as well as aerial) exclusive of telephone lines (under- ground as well as aerial), private- owned electric lines indoor arrange- ments, such as that for electric light- ing and power supply.
Tokyo Electric Light Company:	Transmission lines (underground), electric supply lines (underground as well as aerial), electric telephone lines (underground as well as aerial), private-owned pipe lines (indoor arrangements, such as that for electric lighting and power supply).
Tokyo Gas Company:	Gas mains and appurtenances, private- owned pipes and various indoor ar- rangements.
Communications Department:	Telephone and telegraph systems (pri- vate telegraph and telephone systems, public telephone systems, etc.), postal pillars.
Army General Staff Office:	Trigonometrical surveying base points, etc.
Railway Department:	Underground cables, etc.
Education Department:	Telegraph poles and appurtenances, etc.
N.B. As to the "parties concerned" under State jurisdiction, there are, besides those mentioned in the above table, which stand under the control and direction of the Municipality of Tokyo, the Metropolitan Police Board, the Imperial Guards Division, and some other Government Offices, the City Public Health Department, the Yedo-gawa Water Supply, the Tokyo Electric Power Co. and the Oji Electric Co.	

## SECTION II

### "ZONING SYSTEM"

The "Zoning System" to cover the whole City of Tokyo and thirty-six

towns and villages composing the suburban districts of the same City, was formally promulgated and put into execution in January, 1925, with proper sanction of the Government, after deliberation and decision by the Special City Planning Committee. However, some slight amendments were afterwards effected in the content of the "system," in consequence of which thirty-two towns and villages in suburban regions of Tokyo City came under government of the "Law of city house building"; and, as a natural result, to these towns and villages, too, the application of the "zoning system" was deemed necessary and advisable. Therefore, after due consideration and decision by the Special City Planning Committee, and also duly supported by the formal sanction of the Government, notification was issued to that effect on April 25, 1929. Here follows a concise description of the content of the system. (see map of the zoning system of Tokyo City)

(1) Residential Zones—The western half of the districts falling under application of the "Law of city house building," embraces the area described by a line drawn from the hilly terraces of Ueno and Asukayama, on the north, and, running through the different wards and some suburban districts situated in the western part of the City, as far as Meguro and Takanawa in the south, —indeed, the whole region popularly known by the name of "Yamanote" (up-town). The regions comprised within this extensive circle are universally noted for their diversity of landscape features, being rich in hills and undulations, which give special charm to their scenic attractions. This is, in fact, one of the chief reasons why they have long been popular from ancient times, as places particularly suitable for residential purposes. It was, indeed, this fact that induced the authorities to mark out these regions as "residential zones."

(2) Business Zones—The wide expanse of land lying west of the River Sumida, generally and popularly called "Shita-machi" (downtown), comprises Asakusa and Shitaya wards in the north; then in the middle, the wards of Kanda, Nihonbashi, Kyobashi and a portion of Kojimachi (that is a district popularly known as "Marunouchi"); and, in the south, the eastern half of Shiba ward. This broad region is characterized by its comparative freedom from undulations or inequalities of ground, while the uniform regularity of the roads and streets, coupled with remarkable facilities in communications both by land and water, constitute its outstanding feature. Therefore, from old times this region has been a veritable cradle for commerce, which there even now is in a state of such prosperity and development. This is the principal reason which inclined the authorities to label these districts distinctly, as "commercial regions."

(3) Industrial Zones—These regions comprise the districts east of the

Sumida, that is, Honjo and Fukagawa wards, as well as the contiguous locality stretching as far as to the vicinity of the Arakawa canal and the entire area lying continuous in the north, in the valley of the old Arakawa.

These generally low-lying districts are traversed and interested by rivers in all directions, which naturally renders communications on land and by water easy and convenient. Moreover, as a matter of fact, industry has already put forth vigorous shoots at some places there; and this fact, no doubt, amply entitles these localities to be indicated as "industrial districts." Also the whole coastal region situated in the valley of the lower reaches of the Meguro River, as well as in the directions of Oi and Omori, has been formally marked out likewise as "industrial zones." We may add that the regions lying on the borders between the "residential" or "commercial" zones and the "industrial" zones, have been ticketed as "zones not yet indicated." We give below a comparative table showing the exact areas in square metres and the percentage of the different kinds of districts, lying within the compass of the land sectors of the City Planning Scheme for the City of Tokyo:

Districts	Area	City of Tokyo percentage
Residential Zone . . . . .	38,347,107.42 sq. m.	48.1
Commercial " . . . . .	23,471,074.37	31.9
Industrial " . . . . .	11,570,247.93	14.5
Zone "not yet indicated" . . . .	4,297,520.65	5.5
Total . . . . .	77,685,950.37	100.0

### SECTION III

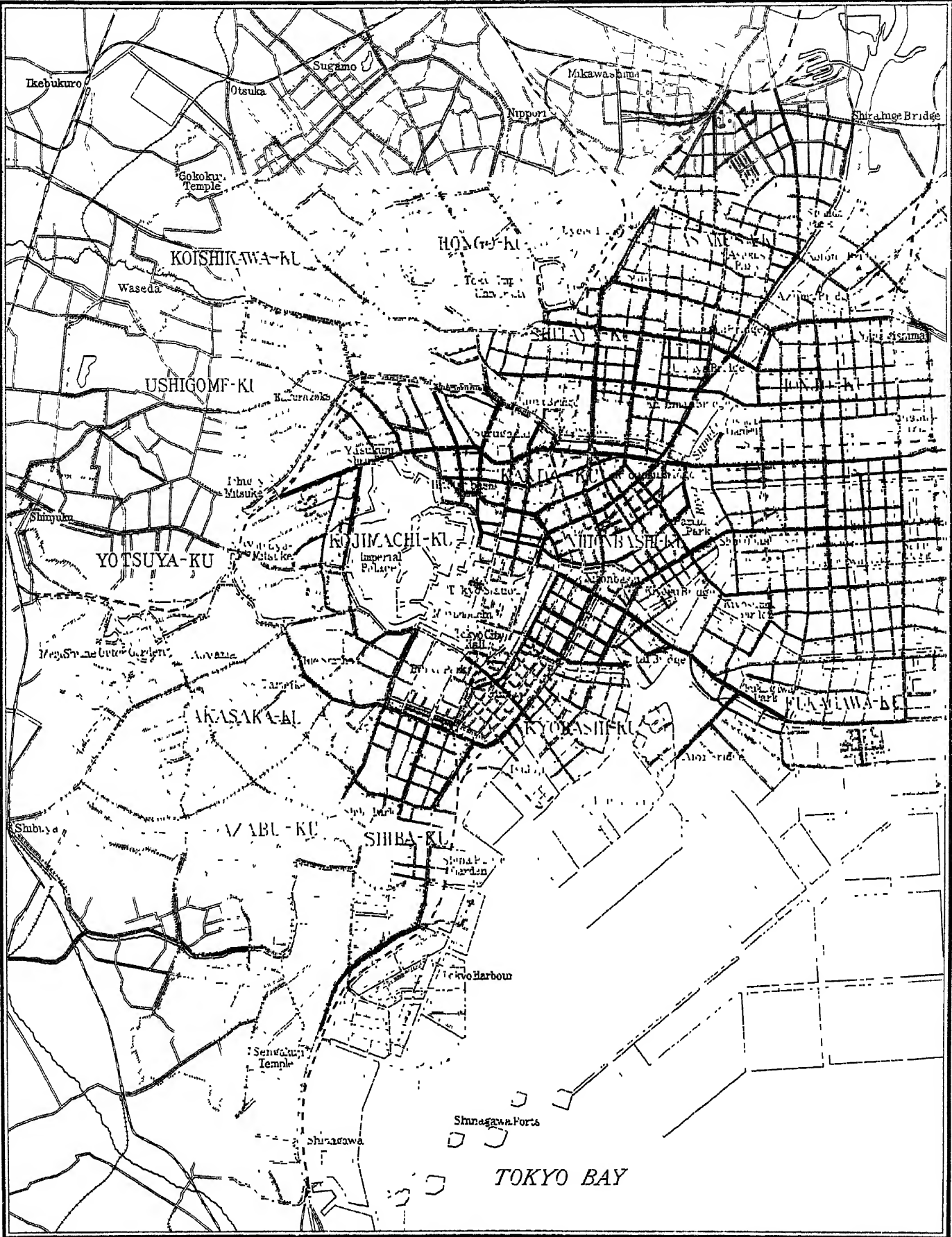
#### SUBSIDY IN AID OF "CITY RECONSTRUCTION BUILDINGS"

##### 1. "Fire prevention zones" and Subvention in aid of buildings

The points which merit special consideration in indication of the "fire prevention zones" are: the general configuration of the district concerned; the general direction of the wind blowing there; the situation of the roads and ways actually in existence or those planned and decided, the rivers as well as the empty plots of land left unutilized; a record of the occurrence of the fires in the past; the disposition of fire-proof buildings; the uses of the land plots at present and the degree or condition of prosperity, as well as observation of prospective development.

From this viewpoint, the authorities carried out a series of investigations. In August, 1922, the "fire prevention zones" of the city planning for the City of Tokyo were indicated. In the fire-destroyed districts, new plans for

## “FIRE PREVENTION ZONES”



EXPLANATION.

**"A" class Fire Prevention Zones**

### "B" class Fire Prevention Zones

Special City Planning Roads

Circle to complete to show, **Burnt Area**





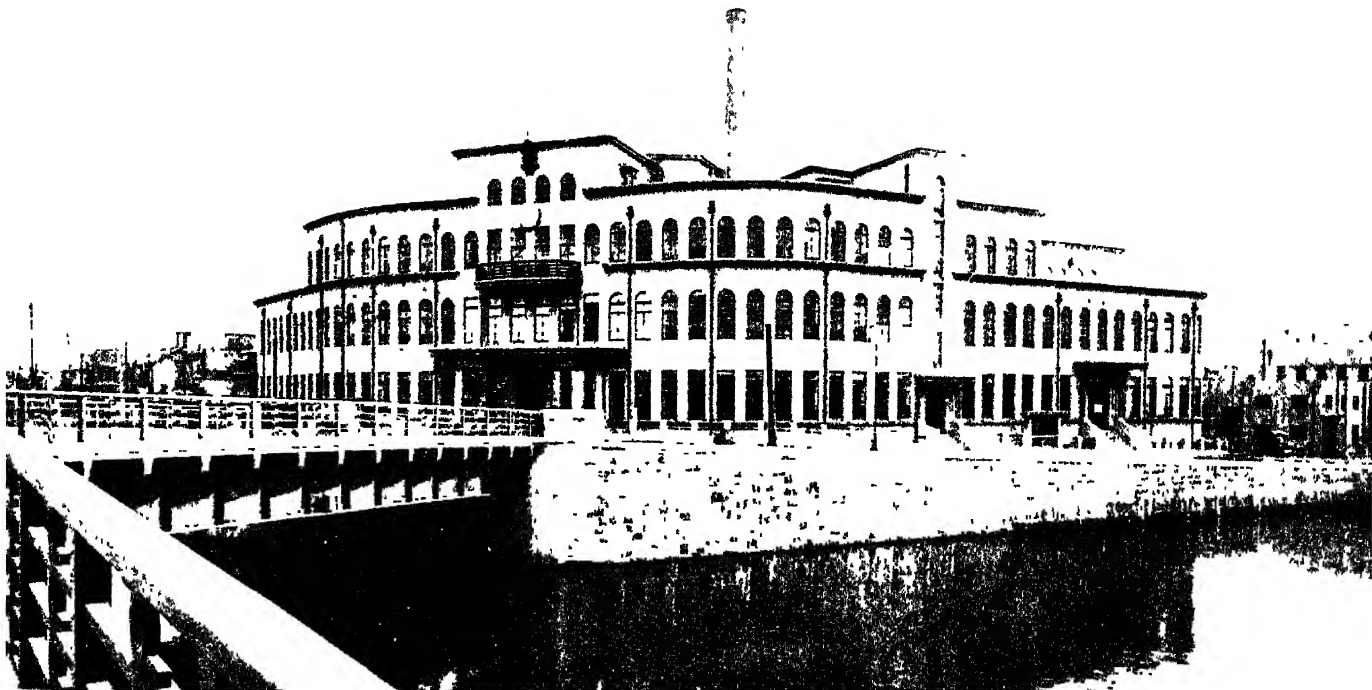
**A section of the "Fire Prevention Zones" in Tokyo**

### THE FIRE PREVENTION ZONES

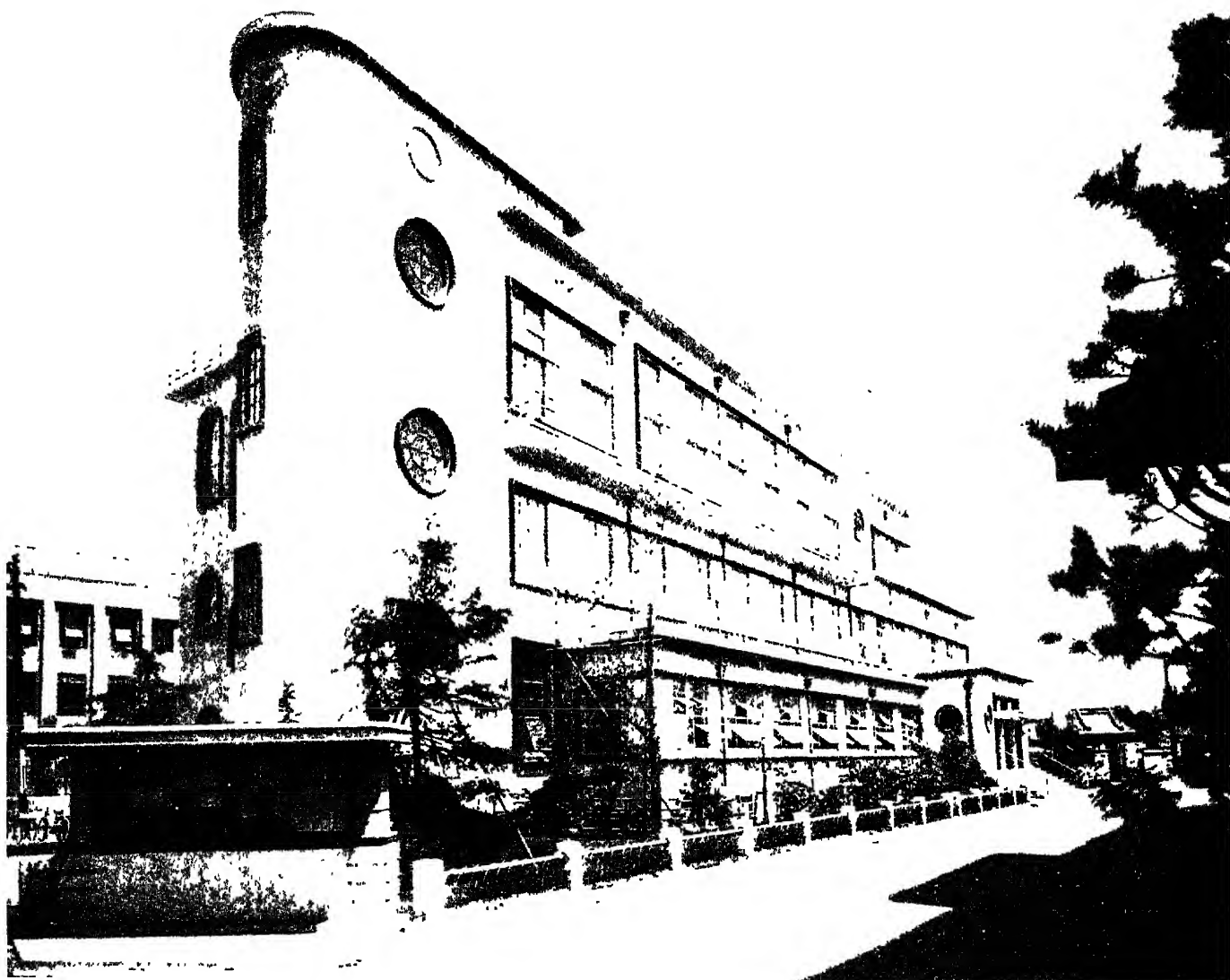
The cities of this country have from of old been of frame buildings, and fire disasters have constituted a great menace to citizens. Fire damage reaches an enormous total every year. In the late great earthquake calamity, conflagrations were responsible for by far the greater part of the losses suffered, as already stated. Hence it is that the introduction of fire prevention zones constitutes a matter of urgent necessity in the execution of city planning. The city house-building law provides that the Minister of State concerned may, when he deems it necessary for purposes of preventing fire, designate a fire prevention zone, and put in force necessary regulations relating to the fire-proof nature of buildings within the locality so designated. Under this provision fire prevention zones were designated respectively in Tokyo and Yokohama in August, 1922; and it was made compulsory that fire proof material should be used in all new buildings, reconstructions and extensive repairs within the zone. Soon after this, before the fire prevention zones had been established, the two cities were overtaken by the great earthquake conflagration.

In the execution of the reconstruction plan it was found, as the various works of reconstruction progressed, that it was necessary to introduce changes in the fire prevention zones previously determined.





Kyobashi ward office newly built, Kyobashi ward



Shitaya ward office rebuilt, Shitaya ward

# UNDERTAKING PERTAINING TO RECONSTRUCTION

making roads, rivers and public parks were formed; while, in view of the valuable lessons taught by actual experience in the Earthquake Disaster, they did not fail to see the necessity of introducing some alterations in the indication of the "fire prevention zones." So, in the fire-swept regions, a greater part of "B" class "fire prevention zones" were transformed anew into "A" class "fire prevention zones." The amendment was duly made known to the general public by notification from the Home Department on April 2, 1925. The table appended below shows the exact areas, in square metre of different "fire prevention zones" in the City of Tokyo:

Kinds	Areas of "fire prevention zones"		
	Within the fire-devastated districts	Outside of the same	Total
"A" class "fire prevention zones"	sq. m.	sq. m.	sq. m.
Collective "fire prevention zones" .....	2,614,876.03	1,193,388.42	3,808,264.45
"Fire prevention zones" in the form of road lines .....	1,434,710.74	—	1,434,710.74
Total .....	4,049,586.77	1,193,388.42	5,242,975.19
"B" class "fire prevention zones"			
Collective "fire prevention zones" .....	191,735.53	13,223.14	204,958.67
"Fire prevention zones" in the form of road lines .....	26,446.28	347,107.43	373,553.71
Total .....	218,181.81	360,330.57	578,512.38
Grand Total .....	4,267,768.58	1,553,718.99	5,821,487.57
Percentage to total area of the City ...	5.4	1.9	7.3

For the benefit of those persons putting up new buildings or extending buildings already in existence in "A" class "fire prevention zones," the Government issued "regulations relating to subvention in aid of buildings in the 'fire prevention zones,'" whereby a channel was at last opened for obtaining official subsidy for construction of such buildings. The sum of the subsidy was not allowed to exceed half of the differences between the cost for the "fire-proof" building and that for an ordinary one, and it was to be regulated by consideration of the actual structural condition and use of the building concerned. The following table sets forth the details concerning the granting of Government subsidies for such buildings in the "fire prevention" districts, during the period between the commencement of the present undertaking and the year 1930.

## THE RECONSTRUCTION OF TOKYO

Kinds	Cases	Floor areas	Subsidies
Subsidy already sanctioned officially . . . . .	911	650,056.19 sq. m.	¥8,470,700
Subsidy already granted . . . . .	660	417,133.88	5,719,061
Cases still pending . . . . .	46	—	—

### 2. Subvention for "City Reconstruction" Buildings

In view of the fact that the financial power and economic resources of the citizens of Tokyo, which sustained such a crushing blow from the disastrous Earthquake calamity, were, of course, absolutely unequal to the arduous task of Reconstruction, the Government at first conceived the plan of forming a company of special character, half-Governmental and half-private, by means of a law to be enacted particularly for the purpose, with the avowed object of facilitating easy supply of money, by way of aiding and promoting what was popularly called "restoration buildings."

But the attempt proved abortive and failed. Later, not entirely abandoning the project, the Government managed to organize a commercial company of ordinary character, which was named the Reconstruction Building Aid Co., Ltd., after due consultation between the promoters, who volunteered themselves from among private capitalists and *entrepreneurs*, on the one hand, and the Finance Department, the Tokyo and Yokohama Municipal Authorities, on the other, in December, 1925.

The Company in question was set up with a capital of 10,000,000 yen, divided into 200,000 shares, and the working fund for conducting the business was supplied, as in the case of ordinary commercial companies in general, by the payment of each share, or by flotation of loans, or again by money borrowed or advanced. Besides, the Company succeeded in obtaining pecuniary assistance both from the Tokyo and Yokohama Municipal Authorities, who gave ready consent to the accommodation of 60,000,000 yen in all, for a long period at an annual interest of 6 percent. Backed with these funds, the Company now formally launched on its proper business of affording aid to persons who intended to put up "fire-proof permanent buildings" in those parts of the fire-demolished districts both in Tokyo and Yokohama, where the work of land readjustment had been already finished. The Company were ready to undertake the actual construction of such buildings, for the benefit of such persons, and the costs incurred would be refunded to the Company, in instalments, within twenty years at the latest, at which date, of course, the ownership of the buildings would be transferred from the Company to the party interested. Or the requisite construction funds might be advanced to such persons, the repayment of which was also required to be fulfilled in the course of twenty years. In either case a yearly interest of 9 percent was required. In case the



A Municipal apartment house



Store Buildings built by funds borrowed from the Reconstruction Building Aid Company



The big "Torii," shrine gate, in front of Yasukuni Shrine surrounded by cherry blossoms.

profits achieved by the Company failed to reach 8 percent of its capital, both the City of Tokyo and the City of Yokohama should undertake to bear the deficiency up to the limit of 8 percent. And though, in nature and organization, the present Company was nothing more than an ordinary commercial concern after all, yet its real significance and *raison d'être* lay in the fact that it constituted an important organ for promoting and facilitating the work of Reconstruction, under combined control and direction of the Government and the two Cities of Tokyo and Yokohama.

## 3. Subvention for wooden buildings

The "Reconstruction Building Aid Company" of which we have spoken in the foregoing paragraphs was mainly concerned, in its principal activity, with subventions for fire-proof buildings. But wooden buildings, the presence of which had been conspicuous in the districts swept and destroyed by the Earthquake conflagration, naturally claimed attention from the authorities. In view of this fact, the City of Tokyo succeeded, in 1926, in getting from the Government a loan of 7,000,000 yen, to serve as funds for subsidies to be granted in aid of wooden buildings destined to be used as shops or wooden residential houses intended also to serve as shops. Later, in 1928, the City was again accommodated by the Government with the same amount of money to be employed for the same purpose. However, from April, 1926, on the accommodation of building funds was extended to the general public, in accordance with the provisions of a definite set of rules specially drawn up to govern this affair. The following description is intended to give some idea of the actual method and procedure of accommodation employed under these regulations. In passing, we may mention that by May, 1931, the City had exhausted accommodation of the "restoration funds"—14,000,000 yen in all—to the various bodies and associations, of which mention will be made in a later paragraph.

(1) Method of subvention—The method adopted in granting subventions was by organizing a credit association in each of the twelve fire-swept regional sections, the accommodation of monetary aid, in the shape of subvention, being effected through them to any of their needy members.

The prospective number of the buildings to be set up with the aid of subvention out of this fund was at first 4,000 in all. But this number came later to be increased to from 8,000 to 10,000, in consequence of revision of the original plan, as the money refunded might be again employed as subvention for the accommodation of other members of the association who were in need of money for projected buildings.

(2) Method of advancing accommodation building funds—The maximum limit of money to be advanced in aid of buildings was fixed at 80



percent of the total amount of the cost of construction; while the maximum amount of the cost of construction for a single individual member of the association, was fixed 6,000 yen. The exact sum of money to be accommodated was decided by the Council of the association, on the basis of the results of examination by them of the plan of construction submitted. The terms or conditions to be complied with were as follows:

- (a) A member of the association to obtain accommodation of the fund had to give a mortgage on the building he proposed to put up with the money to be advanced.
- (b) Two joint sureties were required, who had domicile within the Prefecture of Tokyo, and who were payers of a direct national tax of twenty yen or more a year.
- (c) The building concerned was to be properly insured against fire by a Fire Insurance Company, as specified by the association.

(3) Control and supervision of the association—The establishment of the association was to be undertaken chiefly by the head of the ward concerned, while the Commercial and Industrial Bureau, in the Municipal Office, was principally responsible for control and direction of the association. It may be added that the City specially granted to the association, at the time of its inception, a sum of 10,000 yen, by way of strengthening its financial vigour and resources. The number of the monetary advances effected by the different associations, reached as many as 4,415, while the actual money thus accommodated aggregated 12,766,226 yen (August 31, 1932).

## SECTION IV

### GEOLOGICAL INVESTIGATION AND GUIDANCE FOR THE CONSTRUCTION OF BUILDINGS

(1) The nature of the geological formation has unquestionably a close and important relation with civil engineering works and architectural enterprises. It was solely for this reason that, when the Reconstruction Bureau first set itself to formulate necessary plans for rebuilding the wrecked Capital, it also conceived a project, as part of its comprehensive and ambitious reconstruction plans, of carrying out a geological survey both in Tokyo and Yokohama; and for the realization of this work, a sum of about 440,000 yen was specially put aside as requisite funds. This geological investigation was to be finished in the six years from the 12th fiscal year of Taisho (1923-4) to the 3rd fiscal year of Showa (1928-9). And to make the work of actual investigation



easy and rational, it was proposed to divide it into two distinct departments: namely, the "out-work" and the "in-work." In the former division of work, the principal duties imposed were: investigation of the layer order of each rock stratum, its formation and distribution, as well as the exact nature and condition of the different kinds of rock formation, the existence or presence of underground water-courses, and all other necessary informations and data of kindred nature. On the other hand, the "in-work," was to arrange and put into order systematically all the materials thus gained by means of the "out-work"; and, as regards the specimens prepared, to conduct with their aid a series of elaborate examinations, chemico-industrial and microscopic; and, finally, with the whole body of available results achieved in this way, to draw a geological chart and to compile an authoritative report, as a proper and respectable epilogue to the arduous and very important work of the geological survey.

Let us now cursorily review the actual results attained by the geological investigation as conducted in the City of Tokyo. It was in March, 1924, that the work was first started. Since then, a series of boring operations has been conducted at several points, in a manner both efficient and systematic, so that the number of minor borings of lesser depth, that is, about 30.30 metres, reached even 367, while those of greater depth, namely, about 121.21 metres or so, were nine in number. The results thus gained were all embodied in a geological chart and made known to the general public from time to time. The first Geological Report concerned itself chiefly with the actual distribution of the diluvial strata and the tertiary stratum,—both of which are strata universally known for comparative hardness and solidity,—in the "down-town" districts of the metropolis. The imperfect or inaccurate points in the statement or description in the first report were later corrected or mended by the second report subsequently compiled, which contained, besides, a detailed description of the actual condition of the subterranean disposition of different rock layers constituting the diluvial stratum. Still later, there was brought out a third report, devoted largely to a description of the exact nature of the underground distribution of the various rock formations in the alluvial stratum.

(2) Official guidance for construction of buildings—The Bureau of Reconstruction, perceiving the necessity of giving proper counsel and guidance to citizens generally as well as to those engaged in architectural work as an occupation, with special reference to the enterprise of rebuilding and restoration both in Tokyo and Yokohama, decided to give a series of lectures on the various branches of architecture and allied subjects, for the express object of diffusing knowledge and deepening comprehension of the practical side of the advanced modern science of architecture. For this worthy purpose, a sum of about 70,000 yen was included in the regular Budget, to be disbursed in the

course of the two fiscal years 1923-4 and 1924-5. Parallel to this there was held more than once a consultation meeting of the persons interested in this subject. Further, by way of supplementing these two enterprises, they took steps for printing and distributing leaflets or pamphlets, aiming at speedy and satisfactory realization of the object in view.

## SECTION V

### ADJUSTMENT OF BOUNDARIES AND NAMES OF "CHO" OR BLOCKS, AS WELL AS OF THE NUMBERS OF THE LAND PLOTS

The necessity of adjusting the boundary lines and names of the "cho" (blocks) in Tokyo City had long been obvious and keenly felt, and the present enterprise of land readjustment afforded a unique opportunity for realization of this long-deferred object of introducing rational amendment. At a meeting of the Special City Planning Committee, held in March, 1924, there came on the tapis, in connexion with the enforcement of land readjustment, a motion for decisive adjustment of the administrative divisions, the boundaries and names of the "cho" (block), as well as the numbers of the houses and buildings, within the districts marked out for the execution of land readjustment. This was then subjected to due deliberation, with the result that it was referred, as a highly desirable proposal, to the consideration and decision of the President of the Reconstruction Bureau. Thus, the proposal for adjusting the names and boundary lines of "cho" and so forth, assumed a concrete shape. Soon, there was got up a special organ for investigation of the matter (named the "committee for investigation of the boundary lines and names of the 'cho,' as well as the numbers of the land plots"), which set about collecting necessary data bearing on the varied matters on hand. On the other side, measures were taken for ascertaining, by proper means, the actual opinion and desire of the general public, in connection with the subject of adjusting the names of "cho." In this way, under the efficient co-operation of the State and the City, investigation was steadily pushed on, till a definite shape was given to a proposal for revision of the names of "cho," and, at the same time, to establish a fundamental principle for actual execution of the same.

Later, in 1925, in consequence of an amendment in the regulations relating to the adjustment of boundaries and names of "cho," the control and direction of the said enterprise which had hitherto been entrusted to the responsibility of the Governor of Tokyo Prefecture, came to be transferred to the jurisdiction of the Mayor of Tokyo. In consequence, in December of the same year, the Reconstruction Bureau made over to the City the adjust-

ment plan (already definitely decided) as well as a proposal embodying a general principle with respect to the adjustment of the names and boundaries of "cho" situated within the proposed districts for land readjustment in the City.

The General Principle followed in Adjustment of the Names and Boundaries of "cho":

(1) Modes of "cho" division—In principle, the "combination mode" was the rule in effecting the "cho" division; and only in inevitable cases, a tincture of the "block mode" might be introduced.

Note: There are now in vogue two modes of "cho" division: one is so-called "road line system" and the other popularly goes by the name of "block system." In the former, the name of the street, or road, is at once the name of the "cho" itself; and the building land plots lining the two sides of the street or road constitute the "cho" concerned. Accordingly, all the houses facing one another across the roadway or street, form, or belong to, one and the same "cho" and, as a result, the numbering of the houses or buildings is most simple and clear. On the other hand, in what is called the "block system," one or more blocks or aggregations of buildings form a "cho." In consequence, each of the two sides of the street or road has mostly a different name, which is a cause of confusion and disorder in the matter of the "cho" division: the shape of the "cho" is liable to be necessarily irregular, while the numbering of the houses and buildings is likewise apt to become confused and complicated. The only superiority of this system over the "road line system" lies in the fact that, in this case the boundaries of the "cho" are distinct and well defined, in comparison with the other system. The new system adopted by our City was intermediate, judiciously combining, as the name indicates, the "road-line system" with the superior or excellent points of the other system.

(2) Boundary lines "cho"—When a road, a river or a canal constitutes the boundary, the central line is to be considered as the boundary line.

(3) Organization and arrangement—If possible, the "cho" should be composed of a number of "chome"; the "cho" division, according to the direction of connection or arrangement of the "chome," may be either in radiating form or in circular or ring shape.

(4) Shape and size of the "cho"—Except for the purely residential districts up-town, the shape of the "cho" in all other districts should be allowed a proper length as far as prevailing circumstances permit, and care must also be taken to avoid cutting up the same "cho" unnecessarily into a number of small sections. The size of the "cho" should always be regulated by the principle that regularity and simplicity of numbering in land plots be not tampered with. Some margin of freedom, however, is recognized with respect to the industrial districts, which naturally stand in a different class from the more apparently prosperous commercial districts.

(5) Starting points and directions—In "cho" of the "radiating shape," the starting point is that nearest to the civic centre, and it is to progress in a

radiating manner. In "cho" of the "circular or ring form," however, the left end facing the civic centre should be chosen, if possible, as the starting point of the "cho" concerned, and progress should be in a circular or ring manner.

(6) Boundary of "chome"—In "cho" of the "combination mode," the great roadway crossing the central roadway of the "cho" concerned should be taken as the boundary line, if the existing circumstances permit; and care must be taken not to allow the boundary, if possible, to cross over that roadway.

(7) Names of "cho"—The original or old names are to be generally preserved. But in the choice of names, proper regard should be had to the fact that they are significant from consideration of business, or time-honoured from historical associations, or they may have some specially intimate associations in the mind of the people at large, or again, sound euphonious and so on. Care must be taken, however, to avoid, as much as possible, the same names, or names mistakable.

(8) Boundary between the city and the "gun" (county), as well as that between the "ku" (wards)—The boundary between the city and the "gun" is to be left as it is now; also that between the "ku" themselves is to maintain the present state. Only in an absolutely unavoidable case, some alteration is to be allowed, by taking into due consideration the actual areas of the residential land plots and other kindred circumstances.

General Principles to be followed in Adjustment of the Numbers of the Land Plots:

(1) How to determine land plot numbers—Each individual "block," surrounded on all sides by public roadways, has one and the same number allotted to it. If the different land plots contained in a "block" belong to different owners, or are of a different kind or grade, in the plan of "exchange land," or are moreover treated as of a different kind or grade, they are to be labelled with the "sign numbers," respectively as No. 1, No. 2, No. 3, and so forth.

(2) Arrangement of land plot-numbers—(a) Starting point of land plot numbers: The starting point of the land plot number must coincide with that of the "cho," and the land plots on one side of the principal road or street of the "cho" are to be all given odd numbers, while those on the other side are to receive exclusively even numbers. The first "block" on the left hand side in the direction of the "cho," is to be made the starting point of the odd numbers. Accordingly, in the case of a "cho" of the "block mode" of "cho" division, the numbers of the land plots are to be all of identical numbers, either odd or even only.

(b) Direction of land plot numbers: The numbers of the land plots are to proceed from the starting point downwards along the principal road or street; and when the bottom of the roadway or street is gained, they are to return to the original starting point on the other side of the road or street.

(c) Starting point and direction of "sign numbers" within the "block": The starting point of the "sign numbers" is to be determined in the same way as that of the land plot numbers, while their direction is, on the right-hand side of the principal roadway, always to the right, while on the left-hand side, invariably to the left.

(3) Designation of land plot numbers—As heretofore, the designation of land plot numbers should be in this way: so-an-so "cho" or "*machi*," so-and-so "*chome*," so-and-so "*banchi*" (that is, No. so-and-so). In case one and the same land plot number is cut up and divided into several subdivisions, each of such smaller divisions is to be numbered in this wise: No. so-and-so (1), No. so-and-so (2), No. so-and-so (3), and so forth.

(4) Change in numbers of "blocks"—Even if one and the same "block" should come to be intersected by the creation of a public road or roads and thus to be cut up into a number of smaller "blocks," no alteration is to be introduced in the old numbering of the land plots.

(5) Change in the division of land plots in future—In the future, too, the division of land plots is to be allowed as hitherto. In case the division or union of lands is to be effected, as the result of the signified wish of the land owners interested, new land plot numbers are to be specially provided. But if the land plots concerned already have "sign numbers" accorded to them, these land plots newly divided are to receive new numbers following the bottom numbers of the said "sign numbers."

(6) Land plot numbers on roads—As a general rule, roads are not accorded "land plot numbers."

The foregoing is a rough outline of the general principles observed in the actual execution of the enterprise. And in pursuance of this fundamental policy a proposal was formally submitted to the City Assembly of Tokyo in 1926, for changes in the extent and boundaries of the "cho" as well as modification in their names, with respect to a portion of certain districts within the City of Tokyo. Since then, up till the end of 1930, as many, indeed, as 29 proposals were presented to the civic organ of deliberation, the "committee for adjustment of the names and boundaries of 'cho,' as well as of the land plot numbers" which held as many as 49 sessions. And by the end of 1931, the number of the districts marked out for land readjustment, where change of the names and boundaries of the "cho" had been formally decided, reached 44

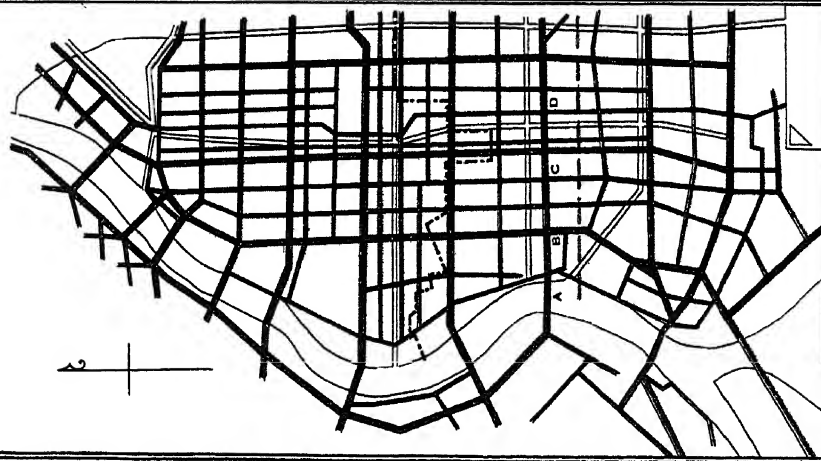
in all; which figure, together with still another land section not embraced in the scheme of land readjustment, reached a total of 45, the total number of the land sections contained within the City being 51. The remaining six land sections still awaiting their turn in this matter are to be soon taken up, the necessary proposals for submission to the City deliberative machinery being now in preparation. Thus, the full and ultimate realization of the work of adjustment may be said to be practically within sight.

### SECTION VI

#### SUPPLY AND DISTRIBUTION OF SAND AND LOOSE EARTH FOR USE IN RECLAIMING LOW-LYING SWAMPY LAND

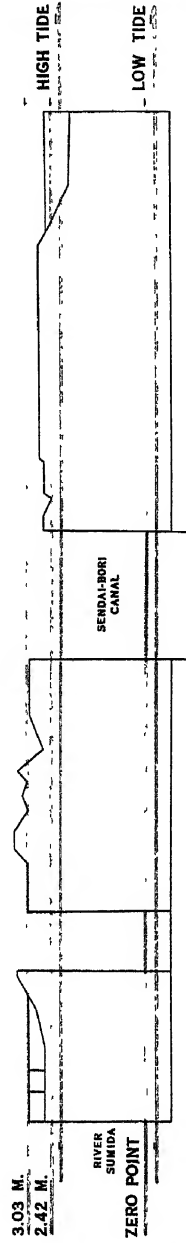
The two wards of Honjo and Fukagawa, and the districts in contiguous vicinity, are notorious for being swampy and unhealthy from the defective condition of drainage; and, moreover, they are always subject to damage and injury from floods and hurricanes. Especially, when there happens to be a too abundant rainfall in mountainous regions where the river Arakawa takes its rise, the districts lying along its lower reaches of the river are sure to suffer disaster from inundation caused by heavy falls of rain. On such occasions, the Honjo and Fukagawa districts are quickly submerged under muddy water which, sometimes, will not recede for weeks together. In view of this, the Government early undertook to form a plan for riparian improvement of the river Arakawa; and the actual preparations, therefore, already began as early as 1911; and 1913 saw commencement of the actual engineering work on the river, which was practically brought to completion in 1924. In consequence, the ravages from flood somewhat abated; but as to the precautionary arrangements against possible damage from tidal waves and rain-water and want of rationalized drainage, it was decided that there was nothing to merit special mention. Therefore, on the occasion of the disastrous tidal waves in 1911, 1917 and again 1922, the devastation wrought was severe and heavy. But in spite of the bitter experience thus gained, the authorities concerned were shamefully tardy and perfunctory in providing against the possible recurrence of natural calamities of similar nature, contenting themselves with partial repairs or dredging of river and canals, or with creation or improvement of ditches and gutters, all of a temporary emergency character. On the other hand, the inhabitants of those flood-cursed districts, too, were satisfied merely with temporary measures; for example, raising the level of the plot of land on which their dwellings stood, by means of sand and loose earth procured elsewhere, seizing the opportunity afforded by the new con-

# ROUGH MAP OF SUPPLIED DISTRICTS

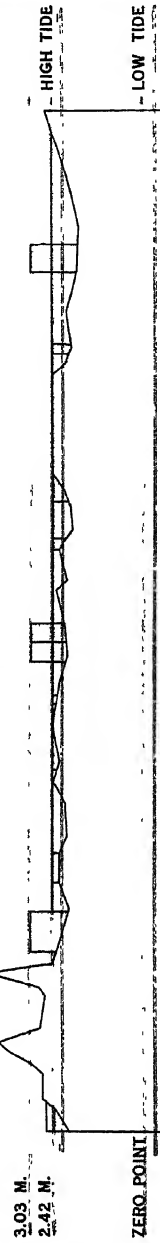


## SECTIONAL DIAGRAM OF SUPPLY OF SAND AND LOOSE EARTH FOR USE IN RECLAIMING LOW LYING SWAMPY RESIDENTIAL LANDS

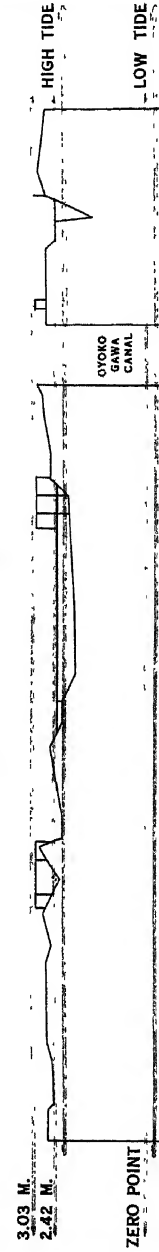
A ——— B



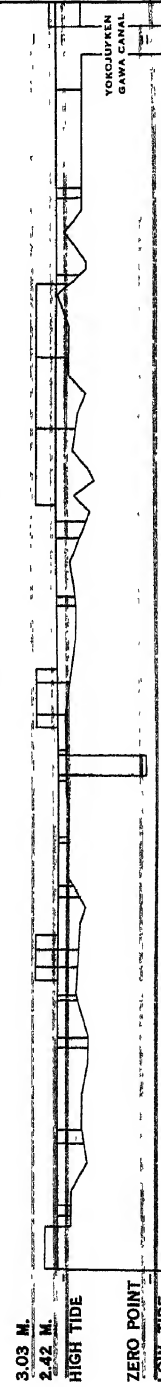
B ——— C



C ——— D



D ——— E



### EXPLANATION

- OLD GROUND
- SUPPLIED AREAS BY REGULATION
- SUPPLIED AREAS BY ACTUAL CIRCUMSTANCE
- ROADS
- RIVERS & CANALS
- HEIGHT OF HIGH AND LOW TIDES
- STANDARD LEVEL OF HEIGHT





struction or rebuilding of houses and dwellings. Thus, in every case, no arrangement of permanent nature was planned and executed, and, therefore, urgent necessity for such was felt the more keenly.

Now, the plan formed by the City of Tokyo for reclaiming the low-lying marshy districts in Honjo and Fukagawa, necessitated the inclusion in the municipal budget for the fiscal year 1922-23, the requisite expenditure for execution of land surveying and other works of investigation. Again in the budget for the next fiscal year, a sum of 1,072,500 yen was inserted for expenditure on work stretching over three years; that is, from the fiscal year 1923-4 to 1925-6. And as places demanding immediate attention and urgent repair there were indicated, a certain number of places on or near the banks of rivers, as well as roads running along the river courses or those situated otherwise. These places were all raised with sand and loose earth to a height of 3.03 metres. Further, a project was framed at the same time for dredging the rivers and canals, and the new construction, or repair, of flood-gates. And it was just when the project was in actual progress that the great Earthquake occurred, and the work came to a premature end, while the disbursement of expenditure as provided for in the budget was suspended accordingly.

As to the proper disposal of the ashes and debris left lying in heaps on the fire-ravaged districts, they were all conveyed to the Koto districts, where they were utilized in the work of raising the level of the ground along the riverside and elsewhere.

A rational method and permanent arrangements for prevention of damage from natural calamities in the two wards of Honjo and Fukagawa, claimed, were as a matter of course, most urgent, and demanded the immediate attention of the authorities concerned, but who were just then engaged assiduously in the work of formulating plans for reconstruction of the Capital; and so this part of the reconstruction undertaking was handed over to the General Affairs Section of the Reconstruction Bureau. Repeated meetings were summoned, of the officials concerned, and the problem was subjected to mature consideration. In consequence of these proceedings, plans at last materialized.

(1) As a result, all auxiliary road lines and "land readjustment roads" as well as residential land plots were to be raised respectively 3.03 and 2.42 metres higher than the standard water level mark at Reiganjima.

(2) The earth needed for the purpose of land level elevation was to be carted out and left at definite points at the riverside, the expenses therefore to be borne by the individuals concerned.

(3) Such riverside points were to be specially selected by the persons concerned, for each individual readjustment section, or two or more sections combined.

(4) The rent for these riverside spots was to be borne by the City.

(5) The needed earth was to be supplied in accordance with the express wish of the individuals concerned, who were required to make, at the beginning of the fiscal year, special application for the definite quantity of earth they needed, and the order of supply in compliance with the application was to be decided by lots.

(6) One yen and a half was to be charged for each cubic *tsubo* (6.01 cubic metres) of the earth supplied.

These were some of the more important points in the plan formed for the work of raising the land level in the low-lying districts in Honjo and Fukagawa. And the actual execution and practical side of the project was to be undertaken by the Land Readjustment Bureau. Therefore, the same Bureau at once commenced an investigation as to the source of the earth was to be obtained, as well as the utilization of residential land plots by houses and buildings actually standing. With the data thus obtained, a definite basic plan was established for supply and distribution of sand and earth. And a budget of the expenditure necessary for this project was duly submitted to the City Assembly, where it was approved and passed. Accordingly, a set of detailed rules was framed and put into force on October 16, 1926. Here follow some of the main features of the rules in question:

- (1) Persons wishing to raise residential land plots in Honjo and Fukagawa, may obtain from the City authorities the necessary supply of earth needed. Even in places outside of these two wards, the supply of earth may be given, if the real necessity thereof is officially perceived.
- (2) The supply of sand and earth for level-raising purposes is to be effected within the following limits:
  - (a) In the case of a residential land plot with a level of 2.42 metres or under, as measured by the standard mean water-level mark at Reiganjima, as much earth and sand as the level will come to gain the height of 2.42 metres.
  - (b) As regards the residential plots of land situated near the main trunk roads or auxiliary road lines, besides the supply as specified in (a) above, as much earth and sand as to make possible the raising of the ground to the height of 3.03 metres for the space of 10.90 metres in depth of the land plot concerned.
  - (c) The supply of earth and sand is limited to 150 percent of the site of house or building whether it needs more than of earth and sand. But when a person had no structure on the land plot

before "land exchange," it is recognized 20 percent of sites for structure had been there on the land exchanged, and so as the same to the sites of structure not exceeding 20 percent for the land exchanged.

- (3) For each cubic metre of the earth and sand supplied, a charge of 1.50 yen is to be made.
- (4) Those who wish to get a supply of earth and sand are to present a formal application, by complying with all the conditions prescribed.

According to the original plan, the work was at first to be completed in three years from 1926 to 1928. But the supply of needed sand and earth could not well keep pace with the demand of the public, which fact, coupled with the tardy and obstructed progress of the removal of houses and buildings, as required in consequence of the process of land readjustment, necessarily interfered seriously with speedy completion of the level-raising undertaking; so that, even after the time allowed for the work, there were still remaining lots of land awaiting reclamation. The inhabitants of these two wards, therefore, were clamorous for prolongation of the reclaiming enterprise; and so the authorities thought fit to accede to the wishes of these people. The work, accordingly, was continued till the fiscal year 1931-2.

At the initial stage of the enterprise, the earth and sand requisite for the level-raising purposes was mainly supplied from the mud dredged out of rivers and canals. But this sort of earth was found quite unsuitable for raising the level of residential land plots, which demanded prompt execution. It was only natural, therefore, that the demand for such earth should have been remarkably small. But with the steady removal of houses and other buildings, as an accompaniment to the enterprise of land readjustment, the necessity of earth for use in reclaiming grew so that people were no longer allowed to be particular or discriminating about the quality of the earth to be procured. Thus the demand even for dredged earth became hardly proportionate to the possibilities of supply, in consequence of which the authorities were obliged to devise some rational mode for regulating demand and supply, in order to ensure prevention of undesirable irregularity in the distribution of reclaiming material. In this way, out of the total residential area of the two wards of Honjo and Fukagawa 7,770,928.92 square metres—7,409,315.70 square metres had undergone the operation of elevation to a depth of 2.42 metres or more; in other words, about 95 percent of the whole reclaiming programme had been successfully realized, and thus the enterprise was well-nigh achieved.

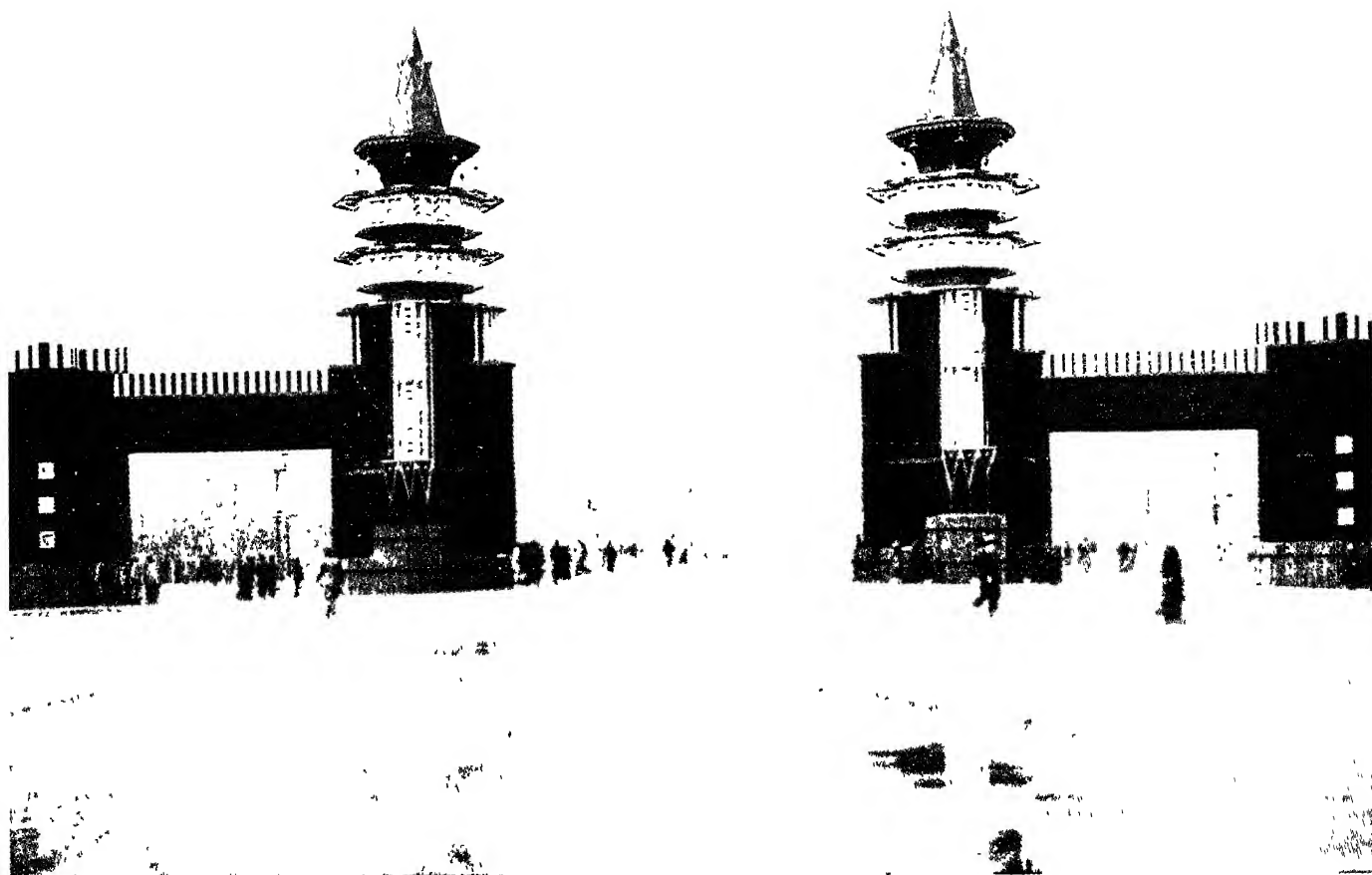
The financial resources for this undertaking were partly the revenue accruing from the very undertaking itself, and partly in the municipal taxes due for the fiscal past year.

## THE RECONSTRUCTION OF TOKYO

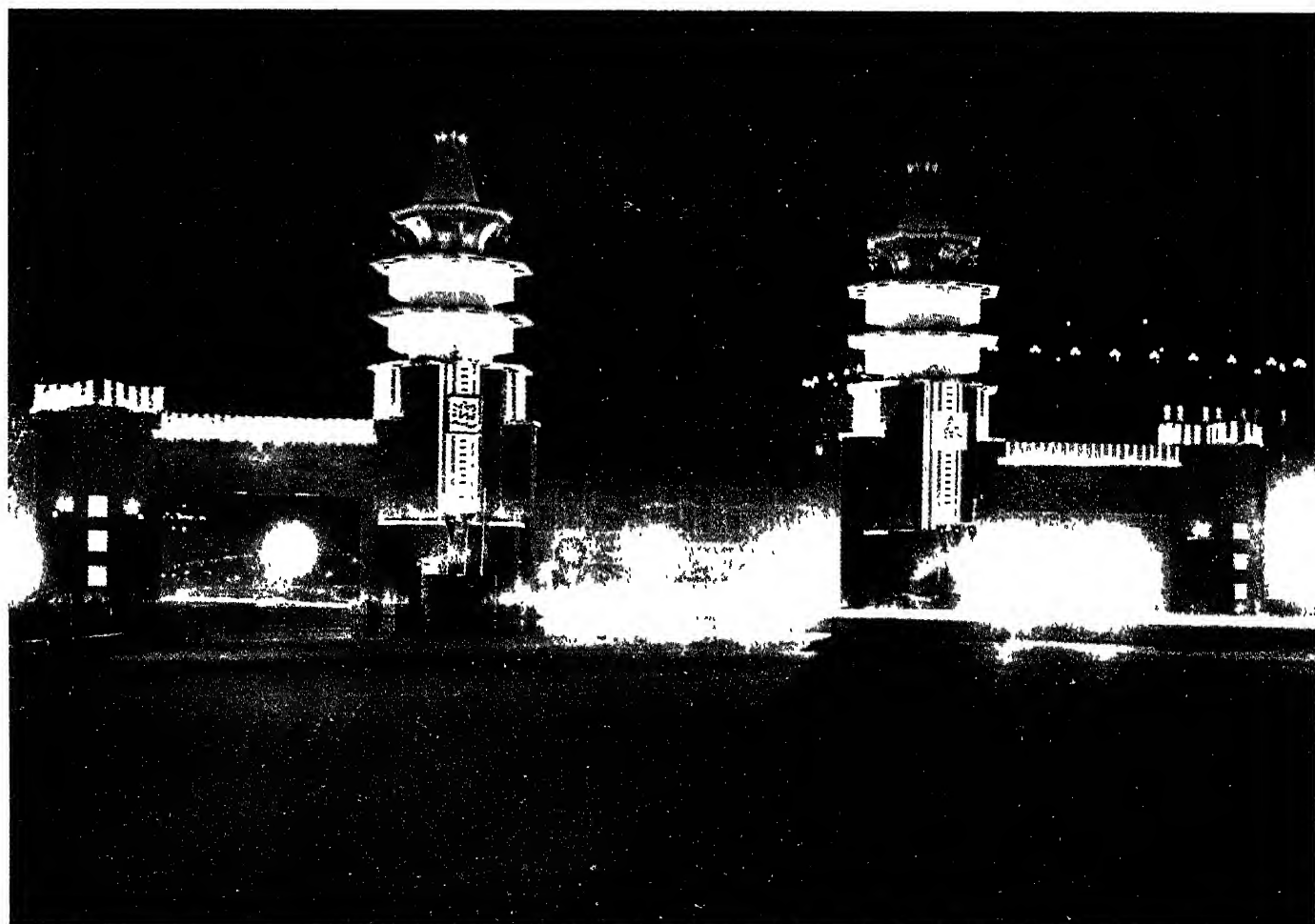
Below we give a table setting forth the particulars regarding revenue and expenditure for the six fiscal years concerned:

Fiscal year	Expenditure for distribution of sand and earth	Revenue accruing from sale of sand and earth
1926-27 .....	¥21,498.38	¥15,086.25
1927-28 .....	34,360.63	32,380.20
1928-29 .....	37,834.66	53,403.75
1929-30 .....	29,179.40	39,262.95
1930-31 .....	21,883.08	24,231.30
1931-32 .....	34,877.37	5,650.50
Total .....	¥179,633.52	¥170,014.95

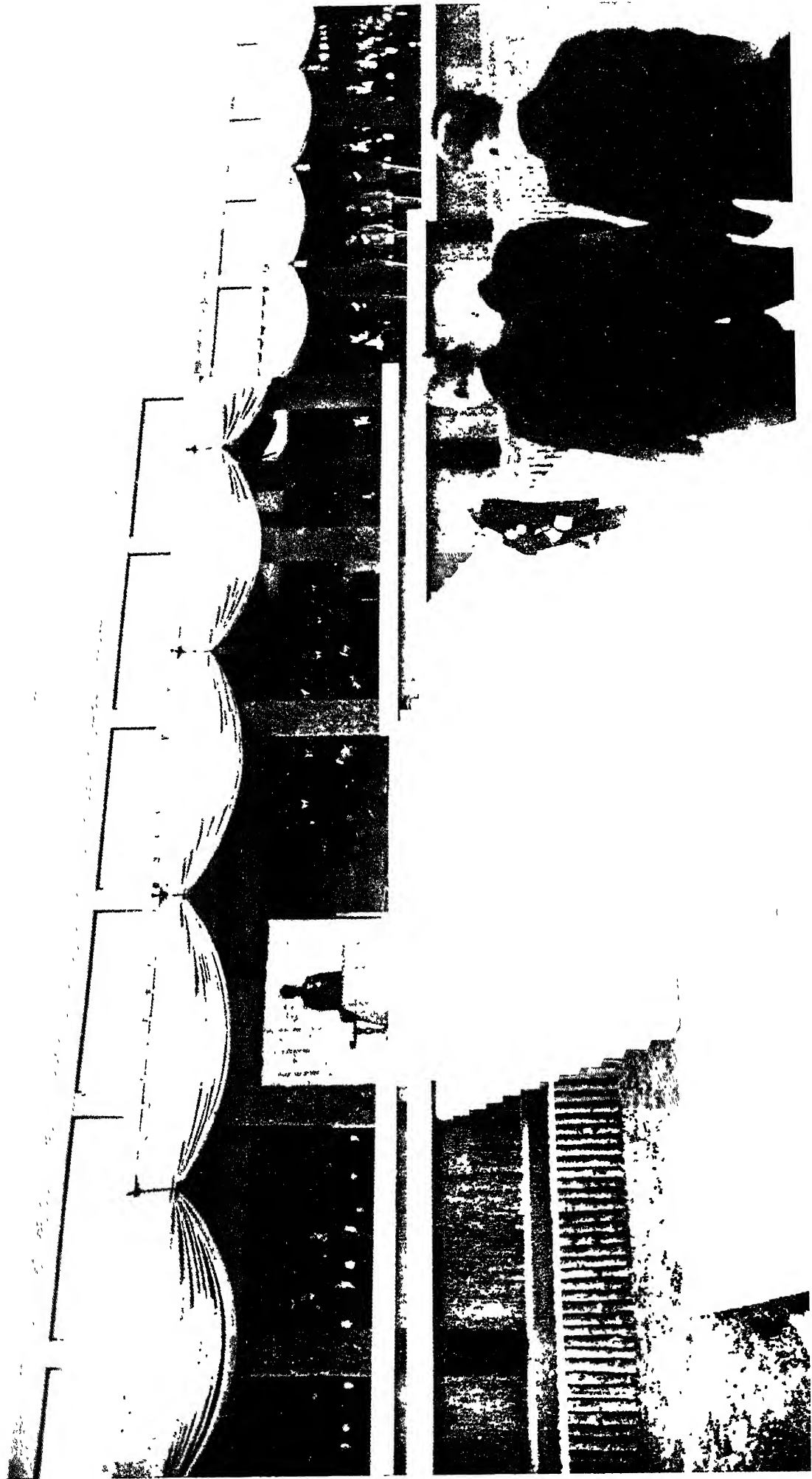
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A big triumphal arch at the old site of Babasaki gate (daytime)

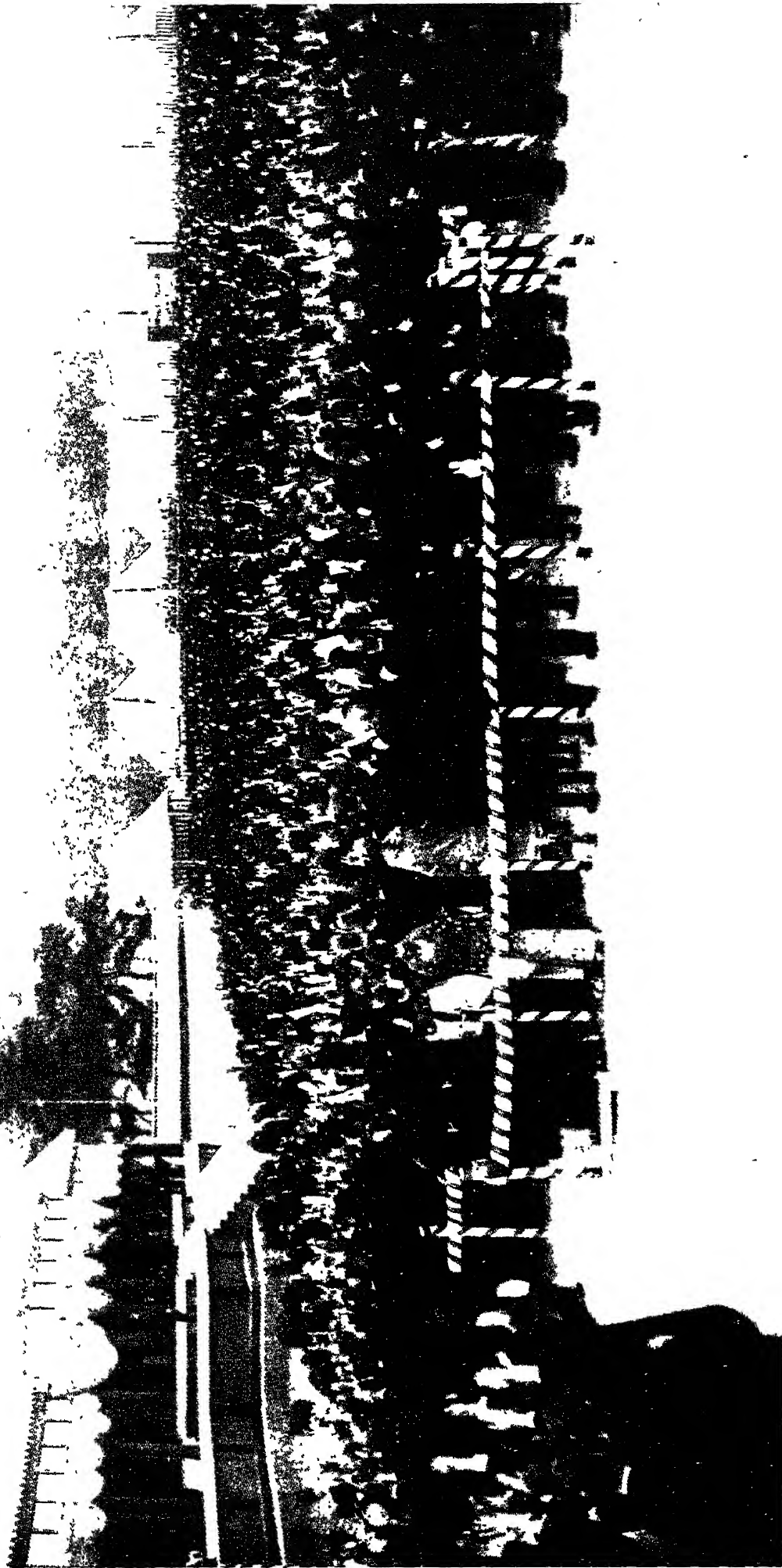


The arch at night



The Imperial Presence at the Commemoration Ceremony of the Completion of Capital Reconstruction, March 26, 1930





The Commemoration Ceremony of the Completion of Capital Reconstruction at the wide ground in front of the Imperial Palace,  
March 26, 1930: All the members of assemblage, presenting enthusiastic "Banzai" for the Imperial Guest



A banquet at the Tokyo Kaikan, March 28, 1930. Mr. Horikiri, Mayor of Tokyo, standing in the centre, presenting toast and words of thanks, toward his honourable guests

# CHAPTER XV

## Conclusion

### SECTION I

#### GENERAL REMARKS

Since definite formulation of the plans, by the Yamamoto Cabinet, for the Reconstruction of the Imperial Capital, on the great lines enunciated and laid down by the Imperial Edict granted immediately after the outbreak of the national calamity, the Government authorities had been tireless and unceasing in their efforts to combat effectively the after consequences of the disaster. The general public, too, showed themselves highly interested in this and were really praiseworthy for their spirit of faithful co-operation and loyalty to the cause of the civic interest and welfare. Besides this harmony between the Government and the people at large, the different friendly nations overseas extended a helping hand of sympathy and generosity in unstinted measure. Thanks to these three factors, the final reconstruction and resurrection of the Capital has been accomplished in an admirable manner.

In March, 1930, when His Majesty the Emperor was pleased to make a personal inspection of the actual state of restoration of the Imperial City, the municipal authorities had the high honour of presenting to His Majesty a booklet, specially compiled by the City of Tokyo, containing a concise description of the processes of the gigantic work of restoration and reconstruction, as undertaken by the City.

Now, we are drawing near to the end of the self-imposed work of chronicling all matters bearing on the immediate consequences of the Earthquake, the plans and projects for combatting the disastrous effects inseparable from such natural calamity, and then, finally, the actual execution of these projects and schemes for Reconstruction of the Capital; a remarkable trilogy of drama on a grand national scale, in which one who has the eye to see, the mind to think and the heart to feel, cannot fail to perceive a clear revelation of the spirit of heroism, perseverance and resolution, admittedly the priceless legacy of this our Japanese people.

By way of supplementing our description, we give in the following paragraphs, a cursory account of the round of inspection in the new Tokyo made by His Majesty the Emperor, the ceremony of congratulation in celebration of the completion of Reconstruction, as well as the festive party given also in

celebration of the event. Next, we shall give a short description relating to the friendship of the different foreign Powers.

## SECTION II

### IMPERIAL INSPECTION OF THE CITY AND THE VARIOUS FORMAL CEREMONIES AS WELL AS THE FESTIVITIES IN CELEBRATION

The gigantic enterprise of reconstructing the City of Tokyo was successfully accomplished in the comparatively short period of six years and a half. To celebrate, in a proper manner, this memorable event, a ceremony was held in commemoration.

His Majesty the Emperor's Progress through the Reconstructed City for Personal Inspection:

On March 24, 1930, acceding to the ardent wishes of the citizens of Tokyo City, H. I. M. the Emperor was pleased to make a round of inspection through the reconstructed parts of the Metropolis and personally to witness the actual state of restoration accomplished. The route marked out for the Imperial Progress on that day lay through ten wards; and on the way His Majesty was pleased specially to stop at seven different points, to gain a better and more intimate knowledge concerning the state and work of Reconstruction so far achieved.

The Imperial Presence at the Ceremony in Commemoration of Realization of the Work of Reconstruction:

On 26 of the same month, the Home Department, the Prefecture and the Municipality of Tokyo held conjointly a ceremony in celebration of the completion of the Reconstruction Work. H. I. M. the Emperor was pleased to honour the occasion with his august presence. The Home Minister took occasion to report to the Emperor the successful accomplishment of the Work of Restoration. Whereupon, His Majesty was pleased to grant a Rescript couched in very gracious terms,—an honour such as the City of Tokyo has seldom, if ever before, been accorded. Next at the instance of the Premier, three enthusiastic *Banzai* were given for the Imperial Guest; and thus the Ceremony closed in a happy and impressive manner.

The Festive Party given in celebration of the Completion of the Reconstruction Undertaking:

The City of Tokyo, which was accorded, as described above, great

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honour by the Emperor, was filled with a profound sense of gratitude, and immediately after the close of the said Ceremony, it held again a convivial party in celebration of the event, where a splendid gathering of people, nearly 13,000, was present to participate in the felicitating the occasion. Altogether, the function decidedly proved an unalloyed success.

### Public Entertainments and Festal Arrangements to Celebrate the Occasion:

At the time of the Commemoration Ceremony, the City of Tokyo constructed an improvised triumphal arch at the old site of Baba-saki gate. Also, there was a display of fire works, to enhance the festive humour of the citizens. Every ward also vied with the Municipality in this regard: similar triumphal towers, the display of bunting and string of variegated paper lanterns, draperies of red and white, and so on were seen everywhere, decorating the streets and roadways and inspiring the people with the spirit of festive enthusiasm.

On the other hand, the City Electric Department arranged to run a number of so-called "flower-cars" for a few days before and after the Imperial Progress of inspection. Besides, there were got up, especially for the occasion, a "music march," a grand dance, an athletic meeting, a cinema exhibition, and so on and so forth. In fact, everybody seemed to be anxious not to be behind others in concrete expression of their joy and satisfaction on this happy, auspicious occasion.

## SECTION III

### EXPRESSION OF GRATITUDE TO THE FRIENDLY NATIONS

#### OVERSEAS, ETC.

#### 1. The Mayor of Tokyo's Dinner Party in Honor of the Foreign Diplomatic Representatives in the Capital

In order to express, in a definite manner, our sense of thankfulness for the sympathy and help extended to us by the different foreign nations at the time of the great Earthquake disasters and also subsequently in connection with the herculean task of reconstruction, Mr. Zenjiro Horikiri, Mayor of the City of Tokyo, gave a banquet in the great Hall of the Tokyo Kaikwan, on Thursday, March 28, 1930, at 7 p.m. All the members of the diplomatic body and the consular service, both in Tokyo and Yokohama, were invited to it. Those who honoured the occasion with their presence numbered, together with their wives, as many as sixty-seven in all. On the side of the hosts, there were present Mayor Horikiri, the most prominent figure of the evening, Baron Shidehara, Foreign Minister, Mr. Yoshida Vice-Minister of Foreign Affairs, and a number of leading officials from Foreign Office, along with the Deputy Mayors

## THE RECONSTRUCTION OF TOKYO

of the City and a number of chief officials of the City. After due preliminaries, Mayor Horikiri arose and, on behalf of the citizens, delivered the following address of sincere thanks for the prompt measures of relief which the different foreign nations had been sympathetic and friendly enough to extend for the sake of the disaster-stricken people of Tokyo, at the time of the Earthquake calamity of 1923.

### TOAST AND WORDS OF THANKS

Presented by Mayor Horikiri of Tokyo

Your Excellencies, Ladies and Gentlemen:

It is an honour for the Municipality and a pleasure to myself as well as my colleagues that so many distinguished personages of the diplomatic corps and of the consular service in Tokyo and Yokohama, have been kind enough to accept my invitation this evening to this reception given in celebration of the rehabilitation and reconstruction of the Capital City.

I have been looking forward to have the honour of meeting you all, because I have had many things in mind, which I wanted to put before you personally and directly as from heart to heart.

On behalf of the citizens and the Municipality of Tokyo, I have the honour to express our heartfelt thanks and profound gratitude, though too deep for words, to you and through you to the August Sovereign and the Government and people of each country for their overwhelming generosity and most prompt assistance bestowed upon us on the occasion of the terrible catastrophe six and a half years ago.

We remember very well how deeply we were impressed by the extraordinary sympathy of all the nations of the world at and after the time of the great disaster. That tremendous quantity of materials and money for relief sent from all parts of the world certainly overjoyed us, and did much to alleviate the lot of those multitudes of sufferers who had been reduced overnight to the most miserable and dreadful condition imaginable. Without your assistance and moral support, I assure you, we could not have hoped for any such quick recovery from the crushing blow we received.

In the mind of all the citizens of Tokyo, therefore, the only suitable return for this welcome sympathy was to make a success of rebuilding the new Capital from the debris of devastation, far better and safer than it was before. Heartened by the sympathy and goodwill shown us both at home and abroad, we literally flew at the gigantic task of reconstruction with determination and courage.



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Now I am happy indeed to be able to report to you the completion of the work of rehabilitation and reconstruction, a work unprecedented in scope and extent in the history of city planning, after seven years' hard toil and painstaking effort on the part of our citizens, of the Municipality and of the Government, although I cannot but fear the results may be far from satisfying the cordial confidence which you reposed in us.

Let me thank you once again for all you have done, are doing and will do for us, and express the hope that international amity and goodwill between Japan and the other nations of the globe may become ever deeper and more intimate, and that may always be found in the closest co-operation in the sacred cause of civilization and humanity.

I now raise my glass and ask this assemblage to drink to the health of our honoured guests, and I beg that our deep thanks and assurance of highest esteem may by them be kindly conveyed to the respective August Sovereigns, the Governments and the various peoples, together with the report of the completion of the reconstruction work of our City."

To this message of the Mayor, Baron Bassompierre, Belgian Ambassador accredited to this country and Doyen of the Corps Diplomatique in Tokyo, responded in very fitting and cordial terms. The Belgian Ambassador's reply:

### Réponse de Son Excellence

le Baron Bassompierre, Ambassadeur Belge

Monsieur le Maire,

Je suis vivement touché, et mes collègues, j'en suis sûr, le sont autant que moi, des sentiments qu'au nom de la population et de la municipalité de Tokio, vous venez d'exprimer à l'adresse de nos Souverains, de nos gouvernements, et des nations que nous représentons ici. Nous ne manquerons pas de faire connaître ces sentiments dans nos diverses capitales et je suis certain qu'ils y seront hautement appréciés.

Il était naturel sans doute que devant une calamité de la nature et de l'étendue de celle qui a frappé le Japon le 1<sup>er</sup> septembre 1923, le monde entier s'émeuve et que les nations étrangères, chacune dans la mesure de ses moyens, viennent fraternellement au secours de la population cruellement éprouvée de Tokyo.

C'est pour nous représentants de ces nations, une grande satisfaction de constater que ces efforts de solidarité internationale, bien que tout naturels, n'ont pas été pour le peuple japonais un encouragement efficace et qu'ils ont provoqué



chez lui une gratitude profonde et durable.

Si j'ai l'honneur de vous répondre au nom de mes colligues, Monsieur le Maire, c'est que je suis le plus anciennement accredité à Tokyo parmi les représentants étrangers. Je suis aussi le seul à l'exception de M. le Ministre des Pays Bas, qui ait assisté à la tragédie du 1<sup>er</sup> septembre 1923. Qu'il me sois permi comme tel d'exprimer ici la profonde admiration qu'a suscitée en moi le spectacle de la grandeur d'âme du peuple japonais au moment de l'épreuve terrible qui s'est abattue sur lui. Jamais ceux qui ont vécu le drame ne pourront oublier le calme extraordinaire, la résignation de la population, son stoicisme et l'énergie avec laquelle elle s'est immédiatement mise au travail pour relever ses ruines. Les attentions de tous genres qu'eurent pour les étrangers qui partageaient leurs épreuves les autorités du pays et les habitants même les plus humbles, resteront, toujours dans ma mémoire un souvenir très cher qui efface presque celui des scènes affreusement angoissantes dont j'ai été le témoin.

Le travail accompli depuis sept ans pour supprimer les traces du cataclysmisme et pour reconstruire Tokyo est vraiment extraordinaire. J'ai parcouru ces jours-ci les nouvelles artères récemment terminées de Kanda, de Tsukiji, de Honjo et d'Asakusa. J'ai été stupéfait de la beauté de la nouvelle cité, qui comme le phénix de la légende, est renée de ses cendres.

Je suis certain d'être l'interprète fidèle de tous mes collègues en vous présentant, Monsieur le Maire, et en présentant à toute la population de cette belle capitale, l'expression de nos vives et sincères félicitations pour le colossal effort accompli et pour ses magnifiques résultats.

Je bois à la santé du Maire et de la Municipalité de sa vaillante population.

## 2. Dinner Party given by the Mayor of Tokyo in honour of representatives of the Foreign Press resident in Tokyo

On March 22, at 11.30 a.m., the day previous to the great celebration of the Restoration of the Capital, of which mention was made a few paragraphs above, the Mayor of Tokyo City held a dinner party at the Tokyo Kaikwan Hall and invited to it the members of the foreign press resident in Tokyo. The Mayor availed himself of the occasion to give utterance to sentiments of gratitude, on behalf of the entire inhabitants of the rehabilitated Capital, for the great and heavy debt of gratitude for the friendly help and sympathetic munificence ungrudgingly accorded to us at the time of the national disasters of 1923; and, further, dilated in words brimful of sincere appreciation upon the fact that the phoenix-like resurrection of the Capital was chiefly and primarily ascribable to the unstinted help, both material and moral, so generously extended to us on that occasion, closing his remarks with a cordial request to



An attractive river scene in Tokyo: Eitai-bashi Bridge, seen from Kiyosu-bashi Bridge



**"Shisei Kaikan," Tokyo Municipal Research Institute, Hibiya Park**

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convey this mayoral expression of hearty thanks, through journalistic channels at their disposal, to the people of the respective countries they happened to represent. Later, after the formal part of the function was over, the honoured guests of the day were specially taken by the City authorities to the more important sections of the reconstructed districts, in order to afford them an opportunity to make a personal inspection on the spot, concerning the actual state of progress of the Reconstruction Work. It was, indeed, a very significant and wise item on the programme, with which to wind up a public function of such a nature.

### 3. Distribution of a booklet in English entitled "Tokyo Reconstruction Work"

For the dual purpose of commemorating achievement of the colossal task of Reconstruction of the Imperial Capital and to return thanks, in a material way, for the many acts of generosity of the different foreign countries, dictated by humanity and an inborn sense of friendly goodwill to man, the Municipality of Tokyo compiled a little book containing a succinct description of the civic administration of Tokyo City, with, however, special emphasis upon recital of the processes of the Reconstruction Work. This booklet was extensively distributed among the foreign public both at home and abroad.

## SECTION IV

### ADDRESSES IN COMMEMORATION OF THE RECONSTRUCTION OF THE CAPITAL

On the occasion of the celebration of the Reconstruction of the City, the municipal authorities gave a series of public addresses in commemoration of the event, at the Public Hall, Hibiya Park, on March 23, 1930. Those who ascended the platform on that day were Mr. Zenjiro Horikiri, Mayor of the City, Mr. Nozomu Nakagawa, President of the Reconstruction Bureau, and Mr. Hidejiro Nagata, Mayor at the time of the Earthquake calamity, who demonstrated amply his great ability to cope with the tremendous task he was so suddenly called upon to face. The Hall was literally packed to overflowing with an enthusiastic audience, numbering over three thousand. Altogether, the event was an undoubted success. We give below an outline of the speech delivered by Mr. Horikiri:

"The Resurrected Capital: Its Present and Future"

(An address made by Mr. Zenjiro Horikiri, Mayor of Tokyo City)

### I

The Reconstruction of the Capital is now nearing successful completion.

To-morrow, His August Majesty will be graciously pleased to honour us with a personal inspection of those regions which have been wellnigh restored to their former state of beauty and magnificence. Again on 26, we are to be accorded the high honour of the Imperial Presence at a felicitous celebration in commemoration of the accomplishment of the Reconstruction. As citizens of Tokyo City, we respectfully cherish these repeated expressions of His Majesty's solicitude for the prosperity of the City as the greatest honour that has been ever bestowed upon us. Indeed, the Imperial House has been constantly and deeply solicitous of and interested in the work of Reconstruction,—a fact to which we apparently seem to have given little or no notice at all up to the present; for which we now feel extremely regretful and shamed. As you all well know from the accounts given in the newspapers, His Majesty, just previous to appearing at the ceremony celebrating final achievement of the Reconstruction Work, to be held in the spacious ground just outside the Imperial Palace, is to conduct personally a solemn ceremony at the holy of holies within the Imperial Palace ground, for the purpose of formally announcing to the August Spirits of the Imperial Ancestors enshrined there in the fact of the Reconstruction Work having been brought to a successful completion. Thus, we see that the Reconstruction Undertaking has ever been occupying a very conspicuous place in the mind of His Majesty, for which fact, indeed, we citizens of Tokyo are sincerely conscious of the profound feeling of gratitude and immeasurable obligation.

Again, we presume to think, from the fact that His Majesty is to perform personally the ceremony of annunciation to the Imperial Forefathers at the three Sacred Shrines that immediately upon the outbreak of the natural calamity, His Majesty, we feel sure must have been pleased to proceed to the same Palace Shrines and offered a personal prayer for speedy restoration of the Capital City just devastated. The thought of these things cannot fail to touch and impress us in a way both indelible and profound; indeed, we cannot but be filled with an ineffable sense of thankfulness for the Imperial solicitude for the good of the people, which is always sure to be forthcoming, whenever and wherever anything untoward should befall the nation.

Well, the present task of reconstructing and restoring the Imperial Capital has been, needless to say, an undertaking which is, in its scale and scope, almost without example in the world's history; and this unprecedentedly colossal work has now been nearly accomplished in the comparatively short space of only six years and a half. And for this happy conclusion of the arduous enterprise, we should offer our unmeasured praise with a most reverent mind, primarily to His Majesty the Emperor, the head and heart of all national activities and enterprises, who is ever mindful of the welfare and happiness of



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the people and nation. In a word, the admirable realization of the present undertaking, I humbly ask to be allowed to say, is all ascribable to the illustrious virtue of our Imperial Master.

## II

Let me retrace the events from the morrow of the destructive Earthquake and Conflagration. As you all well know, just after the occurrence of the disaster, Count Yamomoto was busily engaged in forming a new Cabinet which was accomplished two days after, that is, on 2 of September and on 3 the day after the formation of the new ministry, the then Prince Regent, that is, the present Emperor, was pleased specially to summon the Premier of the new cabinet to the Akasaka Detached Palace, and, in the name of His Majesty, the August Imperial Father granted an Imperial message couched in highly gracious words, accompanied by a pecuniary gift of 10,000,000 yen out of the Privy Purse. At the same time, H. I. H. the Prince Regent, too, was pleased to give, on his own behalf, also the sum of 10,000,000 yen, which, His Highness directed, should be applied to the purpose of providing all necessary measures of emergency, in perfect co-operation and harmonious concert of plans between the Government and the people at large. Then, on 12 of September, while the inhabitants of the Metropolis were still in a state of great confusion and perplexity, His Majesty the Emperor was pleased to issue an Imperial Edict in connexion with the Reconstruction of the Imperial Capital. This Imperial Edict of September 12, indeed, laid down the fundamental policy of the work of reconstructing the City, the authoritative guidance whereby we were to be led in the path of duty and responsibility for the Reconstruction Work. As you are well aware, the sufferers in the Earthquake Disaster—the thousands homeless and foodless—had been left till then in a miserable state of distress and privation, literally hovering on the brink of starvation, deprived of shelter from inclement weather and of the clothing to keep themselves decent and comfortable.

On the other hand, those who had been fortunate enough to escape the disastrous consequences of the ravaging flames, were fortunate enough not to be troubled and harassed by such baseless fabrications of monstrous nature, and wild content as are inevitable on an occasion of a national calamity of tremendous dimensions; the people at large were helplessly at the mercy of those phantoms of pure illusion. Meanwhile, there was in the air a startling rumor about the alleged advisability of transferring the Imperial Capital to some other suitable place. This Quixotic talk soon found free course every where with alarming speed. The advocates of this masterpiece of absurdity and folly even

strongly maintained, with valour born of ignorance, that Tokyo, which was formerly Yedo, was once before shaken down by a like convulsion of Nature about seventy years ago, that is, in the Ansei era; and this is the second time that the Capital City of the country has been leveled to the ground by the terrific force of nature. In a word, it seems that Tokyo is doomed to the curse of disaster of the same nature once in the periodic cycle of one hundred years; and, therefore, they maintained, it would never do to have the Imperial Capital situated in a place with the possibilities of such fearful danger and peril. However, they were not explicit enough to say where the Capital should be removed to. Maybe, these people had in mind Kyoto or Osaka as the new site to be selected. Thus, Tokyo, at that time, found itself plunged into confusion and disorder, and to some it seemed impossible ever to restore it to its former state of prosperity and equipment. In such conditions, it was only natural that the absurd talk about the removal of the Capital spread rapidly and steadily in all directions.

It was, indeed, just at this juncture that His Majesty was gracious enough to grant a Edict, through the Prince Regent, concerning the Restoration of the Imperial Capital. That was September 12, as you already know. By this Imperial Message, all the people of the Empire were strongly assured that the position of Tokyo, as the Capital and centre of this country, was to remain unshaken and unalterable, and ever remain so through the long years to come. This clear expression of the Imperial intention at once allayed the excitement and uneasiness of the agitated populace. The City of Tokyo, then lying in such a wretched state of dilapidation, was yet to reoccupy its former proud and glorious position as the Capital of the Empire. Accordingly, His Majesty in the Edict of Reconstruction was pleased to remind us that it would not be enough only to restore it to its old condition, but efforts should be made to enlarge its scope and to improve its general appearance, by taking into due consideration possible development in the future. In consequence, the wild talk about transference of the Capital now gradually subsided and finally disappeared, like the hoar-frost melting under the irresistible influence of the warm sunshine. That Tokyo was to continue unchangeably to be the centre of the Imperial Realm, even unto endless generations, was thus definitely and explicitly declared by the Imperial Rescript of September 12. And at the same time it was also clearly indicated that, as the Capital of the Empire, it was not at all sufficient to attempt mere restoration to its original state before the Earthquake Disaster, but that exertions should be put forth for creating a new and greater Tokyo, worthy of the proud name of the Imperial Capital of the country. Thus, all illusions and delusions being now dispersed, the Government gained new heart and confidence, and so was enabled to push steadily



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forward its concrete plans and projects for Reconstruction of the City, with redoubled courage and determination.

### III

Meanwhile, the Government was earnestly and assiduously pushing forward its own plans and schemes for the work of Reconstruction, in satisfactory concert and co-operation with the Municipality. While we authorities were thus engaged in the work of Reconstruction, His Majesty the Emperor was again pleased to issue, on November 10, a Edict for stimulating and stirring up the national spirit, whereby the people were admonished and urged to keep ever vigorous and active in execution of the gigantic task on hand,—an admonition which we took to heart with sincere gratitude and firm determination never to lose sight of it. Indeed, we are already deeply touched and impressed by the great solicitude of His Majesty for speedy Restoration of the Capital,—in fact, I have frequently had occasion of personally experiencing this; for His Majesty was always pleased to deign to put me questions regarding the actual condition and progress of the Restoration Work, when I had the honour to approach the Imperial presence, in one official capacity or another. As you know, to-morrow His Majesty is going to drive through those parts of the City which have now been fairly rebuilt and restored, for the purpose of personal inspection. This is truly, I understand, nothing but another manifestation of the Imperial concern about the Reconstruction of the Capital. On 26 of this month, a very solemn and important ceremony was specially observed at the Imperial Shrine within the palace grounds, where His Majesty personally assisted and presided. Also on the occasion of the ceremony of celebration of the completion of the Restoration, His Majesty graciously honoured us with his presence; and, what we are even more grateful for, also with an Imperial Rescript. We are profoundly moved with a sense of gratefulness to witness the invariable solicitude of the Emperor, shown not only on this occasion, but equally on subsequent occasions and also to reflect that the successful accomplishment of the Restoration is after all chiefly and primarily due to the illustrious virtue of the Imperial Family. Thus, the City of Tokyo and its millions of citizens have been all along supported in their desperate endeavours for reconstruction, with the encouragement and generosity of the Imperial Family, on the one hand, and with the ungrudging help and hearty sympathy of their fellow countrymen throughout the Empire, on the other.

Such display of liberal aid and generous goodwill was not at all confined to our fellow countryman at home; all the world, indeed, was unanimous in extending to us helping hand, in the spirit of friendly feeling and humanity.

In fact, we are sure, what we have been able to achieve is all due to this kind help and substantial aid so lavishly and so promptly showered upon us from all quarters. We cannot but regard all these acts of humanity as absolutely unparalleled in the annals of charity, in respect of the intensity and the depth of the inner motives actuating them. As I already mentioned, the sympathy and concrete assistance from foreign countries, which took the form of money, or goods and articles, or relief materials, were literally unrestricted. Indeed, the pecuniary help from all parts of the country and the monetary and other donations so literally given us by the friendly sympathizers abroad, when calculated in terms of monetary value, reached nearly 118,000,000 yen in all. The money and materials, these valued donations of sympathy and goodwill, were, of course, applied to the purposes of urgent relief and emergency measures at the time. But it must not be understood that these contributions and donations were monopolized by the City of Tokyo; they were, on the contrary, properly and judiciously shared with the City of Yokohama and other towns and districts, which have likewise shared with Tokyo the distress and privation consequent on the visitation of the calamity. After all is said, these gifts of sympathy and charity from all people both at home and abroad, enabled us at least to brave the impending storms, and for which, we should never forget, to the end of time, to return sincere thanks to those liberal donors, who so quickly and kindly hastened to our succour. The formal functions scheduled for 62 and the following day of this month, are, in reality, intended to be the public occasions for openly expressing our heartfelt gratitude for these material manifestations of sympathy and goodwill in connexion with the nationwide calamity.

#### IV

In speaking of the emergency measures taken at that time and of the framing of reconstruction plans and schemes, or of the actual execution of these projects, I believe there is one person whom we should never forget, I mean Count Shimpei Goto. Indeed, the reconstruction plans and projects were all originally conceived and formulated by the Count; and in this initial part of the Reconstruction Work he showed himself all along most earnest and enthusiastic, sparing himself in no way to make them perfect and satisfactory. At the time of the occurrence of the Earthquake, I was in the Home Department, as Chief of the Accounting Section; and when Count Goto came to preside over the Home Department as Minister of the Interior, I had the honour and pleasure of frequently coming into personal contact with the able Minister, in connection with the dispatch of official matters, and also with various affairs relating to relief work and the execution of plans and measures of recon-

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struction. Thus, I gained great benefit and encouragement from the personal influence of this great statesman. It was on the evening of September 2 or 3, if I remember rightly, that the Count was invested with the portfolio of Minister of Home Affairs, and immediately after the formal appointment, he moved into the official residence. Soon after this, he took occasion to call me into his room, and asked me how much money there was in my charge available for immediate use. I was, as I mentioned, then Chief of the Accounting Section, and responsible for all matters relating to funds and the actual employment thereof, within the jurisdiction of the Home Affairs Department.

I told the truth and said that the coffers of the Department were tolerably well supplied with money, and that it was being employed in various effective ways. Whereupon, the Count suggested that, at a time of such tremendous emergency, nothing was better than money, and so it would be necessary to manage to hold as much money as possible, with the aid of which we must set about business efficiently and effectively.

Soon after, the work of relief came to be accorded a separate budget; and, in consequence, we were provided with sufficient ready funds to conduct various arrangements for the relief and help of the distressed population and the execution of emergency measures. True, at that time, I might well have been called a millionaire; for I had, stowed away in the office safes near at hand, bundles and bundles of banknotes, amounting, in value, to hundreds of thousands. Once, I was tickled, to make plain confession, with a sense of vague pride, if I may call it so, by overtures from the Municipal Office of Tokyo for a loan of money. As regards the plans for reconstruction, too there were, at the beginning, various kinds of projects and schemes, which were at first, as you already know, on a scale both colossal and highly ambitious, but which were subsequently contracted and curtailed by degrees till they settled into what they now are. On the other hand, the Reconstruction Budget as at first proposed comprising the enormous sum of five thousand million, or three thousand million, but subsequently suffered successive retrenchment, but I was told to try to reduce it to one thousand and five hundred million, or one thousand million. And the results of my tentative retrenchment plan, after repeated efforts, I duly reported to Count Goto; but it seems that this revised Budget, as shaped and drafted by myself, offered but little data and contribution to the Reconstruction plans later. The Count seems to have had in mind at first plans on a huge scale, requiring a fund of thousands of millions. But as it was too colossal in scope, the plan of Count Goto soon became the butt of public criticism, as a dreamer's design with but little hope of realization. But, it is said, the noble originator of the plan was cool enough to retort that money or no money was the business only of financiers, with which he had nothing to

do, and that he could only go ahead with the ideal plan conceived in his fertile brain, untroubled by the harsh words of realistic critics. Thus Count Goto continued to push on the work, always actuated by idealism; and he may be said to have been entirely absorbed in the business of reconstructing the Capital, so much indeed so that, though he held the portfolio of Home Minister, —later with additional duties as President of the Reconstruction Board,—all affairs which might properly claim his full attention and care as responsible Minister concerned, were wholly given over to the care of the Vice-Minister working under him, while all his energy was dedicated to the cause of the Reconstruction enterprise. Therefore, it was that sharp criticism begun to be heaped upon him in consequence. However, the plans for Reconstruction, though far from the scale and dimensions originally designed by him, underwent gradually adjustment till at last they have come to assume the definite shape that they now show.

## V

As I have already stated, the Reconstruction Plans, now nearly completed, may be, in scale and size, considerably more contracted in scope than those originally formed by Count Goto; yet as compared with similar enterprises of so-called town planning or city rebuilding hitherto attempted in various other countries we can affirm, with confidence, that the present Reconstruction Work may be safely said to be entirely unprecedented in point of scale and grandeur of conception. As you may know, the city of San Francisco suffered a similar disaster years ago, when the greater part of the city was wiped out by the ravages of the elemental forces. At that time, the civic authorities there contented themselves with mere restoration of the city to its former state and appearance; no attempt was made to create a city better than before. The destruction of the heart of London by fire in 1660 was a most notable event in the long annals of that city, and many and various plans were formed for its proper rebuilding. Among them, are two projects for reconstruction designed by distinguished contemporary specialists in the line. Count Goto apparently had these facts in his mind, when he formulated his own schemes for reconstruction of Tokyo City. But these two plans of the English civil engineers were very small and narrow in design and scope. Moreover, they were only the tentative propositions of theorists, who merely drew maps and designs, and offered them to the authorities gratuitously as a piece of advice or suggestion, so to speak, so that they never had a chance of being put to practical test. These maps and designs are said to be still preserved intact. And so the devastated part of London City was, indeed, rebuilt com-

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pletely, but only to its original state and appearance; there was neither improvement nor enlargement. It, therefore, seems quite seldom that, when a city or town is demolished by natural convulsion, as has been the fate of our City, it has been subsequently resuscitated out of its own ashes, like the Phenix of the legend, better and more magnificent than ever before.

Speaking of the historic Conflagration of London of 1660, we are reminded of a like fate which befell the city of Salonica soon after the close of the European War, when it was razed to the ground by fire during the war disturbance. The story of its reconstruction is now well known but, after all, Salonica is a small, insignificant city, in size only a tiny fraction of our Yokohama; and of course, not at all able to bear comparison with the City of Tokyo. From these instances, you are now well aware that hitherto the so-called reconstruction of a city has meant nothing more nor less than mere restoration, in a negative sense, to the original condition; and that it was quite without example to try to enlarge and ameliorate, in a positive way, a city demolished by the forces of Nature. At the time of Napoleon III, the fair city of Paris was subjected to a process of reconstruction—a civic engineering enterprise hitherto reputed to be the most ambitious and colossal record in the pages of history. Paris of to-day, thanks to this Napoleonic foresight and wisdom, is admirably built and laid out, worthy of our hearty praise. But the reconstruction was executed by stages, and not at all at a single stretch in breathless haste. Take, for example, roads, public parks and squares—a conspicuous item in the programme of reconstruction, and see how admirably they are laid out and distributed. But the work of reconstructing Paris was, in extent and scope, we may safely assume, only about half that undertaken by our City of Tokyo. At that time, in all about 2,214,876.03 square metres of land, in the form of roads, squares and other plots of ground, came to be utilized for purposes of public utility, in consequence of the reconstruction scheme. On the present occasion, however, the total area of land plots, hitherto in the form of roads, public parks, squares and canals, which have been, as the result of the execution of city reconstruction, diverted to other ends of public utility, is given as 3,966,942.14 square metres. And this means that, as compared with the figures at the reconstruction of the French Capital, our figures are nearly twice as big. Moreover, this French prototype of reconstruction took as long as 19 years for completion; and what it achieved was, after all, only half as much as that accomplished by our City of Tokyo on the present occasion. And yet this achievement of the Parisians is looked upon with admiration, as the greatest feat in city reconstruction in the world. But, in point of fact, our present work of Reconstructing Tokyo is entirely without example and precedent, as

viewed from the angle of amelioration and improvement of cities. To speak the truth, it is not at all so difficult a task to build a city or town in the midst of a plain or a wilderness; there are actual examples of such enterprises in the world. The case of Tokyo City is no instance of setting up a city in the midst of a wild plain. Tokyo was burnt to the ground, it is true; but the fire-swept area was covered with wreckage and skeletons of demolished buildings; and, moreover, there soon began appear, amidst the ashes and debris, what were then popularly called "barrack" shanties and other emergency housing arrangements, so that the subsequent work of reconstruction may be rationally called a work of remaking or improving what was already in existence. In such a country as America, it is nothing novel or wonderful to build a town in an uninhabited prairie or in a tract of wild country. Washington, the capital of America, furnishes an eminent instance of this. Just at present, the capital of Australia is in process of construction in the midst of a wild prairie still far from the influence of modern civilization. The work, as we know, was begun even before the outbreak of the great War, and since then it has been for more than a decade in building. Plans for the new capital were invited from the general public by means of prizes, and the prize-winning plans have constituted the basis and guiding principle in the construction of that capital. Now, when we reflect on the work of reconstruction in Tokyo, we are further impressed with the particularly difficult nature of the undertaking, which lay in the necessity of executing, as a preliminary step, the process of land readjustment; and that on a great scale and in such a way as to adjust the relations of all rights and claims, which were in a state of apparently indissoluble tangle, satisfactorily to all parties interested. This is, indeed, entirely unparalleled and without example, I am sure.

## VI

And this project of land readjustment formed, from the first, one of the most important problems connected with the Work of Reconstruction; and seems to have taxed the mind of Count Goto very much. As to the mode of land readjustment, there is a method devised and perfected by a German specialist called Adickes, of which the Count seems to have had knowledge. And this so-called "Lex Adickes" method, when applied practically, proved so satisfactory that various cities and towns in Germany gradually came to adopt it. Now, the work of land readjustment, as understood and prosecuted in Germany, the country of the originator of the "Lex Adickes" method, is, in scope and extent, very similar to what here in Japan usually goes by the name of "Readjustment of arable land" or cadastration; that is to say, it is nothing but the



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work of making roads and divisions of land lots in yet undeveloped tract of country or suburban districts, with only a sprinkling of houses, but with some prospect of future development. In land readjustment in the two Cities of Tokyo and Yokohama, the authorities decided to adopt the principles and practical examples furnished by the soidisant "Lex Adickes" method,—Tokyo alone embracing an area of about 3,305,785 square metres, with as many as 203,000 houses, which it was necessary to tamper with, in consequence of the prospective readjustment of land. To be sure, it is without precedent to carry out a scheme of land readjustment in a place so congested with houses and buildings. What made the execution of the enterprise doubly onerous was, as I mentioned above, the complicated tangle of rights and claims with respect to land and buildings; for in such a great city as Tokyo, the value of land is surprisingly high, as attested by the popular saying "one bushel of earth for so much gold." Truly, the work is not at all so easy to accomplish, as appears to casual observers. Accordingly, in drafting plans for "land exchange," as necessitated by the execution of land readjustment, the engineers experienced unimaginably great difficulty and trouble. The designs thus formed were submitted to consideration of the Land Readjustment Committee, who, in turn, spared no effort in negotiating, in a satisfactory manner, with the owners of the lands or other rights concerned. And when once the problem of "land exchange" was settled, there would come up again the knotty problem of removal of buildings standing on the lands concerned, causing much trouble to the authorities. How to conduct the removal of houses and how to pay indemnification were entirely new problems and precedents were absolutely lacking.

All persons concerned, therefore, were utter perplexity, and had to think out new means and ways for the settlement of the problem, with no slight amount of effort. In consequence of this process of land readjustment, about 200,000 buildings were removed and one million persons inhabiting them, too, were compelled to leave their old abodes and move into new habitations. Thus, the work of land readjustment was accomplished in smooth co-operation and mutual understanding; or, in other words, the achievement is nothing but the crystallization of all efforts and energies of the entire population of the City of Tokyo. I am quite proud to say before you that to bring such a huge work to such a successful issue in such a highly satisfactory way, is assuredly a rare thing in the history of any people on earth. And it is all due to the great spirit of hearty co-operation pervading the whole complicated work, that it was realized in a relatively short space of time. The success achieved in Tokyo and Yokohama, indeed, easily bears comparison with that gained in the reconstruction of Paris at the time of Napoleon III. Please don't accuse me of flattery and self-praise; those foreign specialists and scholars who came to this country



last year, to participate in an international conference, were unanimous in their panegyrics on the successful achievement of our Reconstruction Work. This is, I beg leave to reiterate, primarily due to the great exertions of the late Count Goto and, in the second place, to the harmonious co-operation and united efforts of all the inhabitants of the City of Tokyo.

## VII

This work of reconstructing Tokyo City was understood from the first, to be very wide in scope and highly complicated in execution, and so it was not we officials only, but all people, including you yourselves here to-day, that were filled at first with apprehension and misgiving as to the final success of the work. All our fellow countrymen were skeptical about it, perhaps; all people of the world were looking, with eyes wide open, at what we were doing. The Yamamoto Cabinet was, of course, full of serious anxiety about it, when Count Goto formed his plans of reconstruction. As was stated in the ministerial proclamation issued at that time in the name of Premier Count Yamamoto, the success or failure of this enterprise would show, in a clear manner, the true measure of our people's power and ability, while the whole world was looking at us, full of expectant curiosity as to the final result of our gigantic task. Therefore, it would be a revelation of the true power and capacity of the Japanese people that they were able to bring it to a success or else they failed in the attainment of their cherished goal.

In these circumstances, we were required to accomplish it at all costs; and about this there was possibly no dissentient voice to be heard anywhere. It was only natural therefore, that we should have been then "the observed of all observers," or, what is better still, even "the cynosure of all eyes," both at home and abroad.

The total expenditure required for the execution of the work for Tokyo alone has reached, so far, approximately 700,000,000 yen. Besides this enormous expense, there are several items of disbursement applied to the purposes of various emergency measures immediately after the occurrence of the Earthquake calamity. Further, there is yet another outlays which, though not formally included in the category of "expenditure for the work of reconstructing the Capital," are under the rather ambiguous name of "reconstruction enterprise," and, in point of fact, devoted to the same purpose as the expenditure for "Capital Reconstruction Work." This is only one example of the kind; and all other similar items of expenditure are likewise applied to the work of reconstruction in narrower sense. Now, about half of this enormous sum—350,000,000 yen—was destined to be employed by the Government, that

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is, by the Bureau of Reconstruction, for the accomplishment of the great enterprise undertaken. This fund however, was later turned over to the City of Tokyo, and now stands under the control and custody of the municipal authorities. Therefore, it is that a part of this fund was used in the actual conduct of the Reconstruction undertaking by the Bureau of Reconstruction. Now, the other half of the 700,000,000 yen was expended directly by the City of Tokyo for the purposes of Reconstruction; and of this amount one third was taken the State treasury without compensation, while another one-third was money the City of Tokyo managed to raise by flotation of loans in the money market, both domestic and foreign; that is, money raked and garnered together from all quarters as loans and debts; and the other approximately one-third was loaned from the treasury of the Government and must be repaid sooner or later. Armed with this enormous fund, we have been able to manage to achieve what you see now standing before your eyes, already completed and accomplished. And now we, the authorities of the Municipality, are racking our brains as to how all these debts owed by the City may be properly dealt with and disposed of. Thus, the hard work of Capital Reconstruction has been now wellnigh finished. And, as I already told you this work of Reconstruction is very comprehensive in scope, comprising many subsidiary projects, such as the scheme of land readjustment, the making of a large number of new roads—both main trunk roads and auxiliary road-lines, as well as what are, for convenience' sake, called "land readjustment roads." Some of these roads have already undergone the process of solid paving, or else are covered only with gravel. The work of making main trunk roads and the construction of bridges on such roads, as well as the enterprise of cutting a number of new canals, fell to the lot of the Reconstruction Bureau for actual execution, while the undertaking of land readjustment was conducted conjointly, by rational co-operation between the City and the Reconstruction Bureau. Again, as to the restoration of public parks, that of such large public parks as Sumida, Kinshi and Hamacho was entrusted to responsibility of the Reconstruction Bureau, while the City itself saw to the reconstruction of small parks. As to the rebuilding of primary schools, as many as fifty-two schools have been reconstructed. Besides, there is the improvement of the sewerage systems, on which no inconsiderable sum of money has been expended; the Shitaya and Asakusa quarters are already equipped with a perfect system of drainage, and Nihonbashi and Kyobashi also are expected soon to share a like benefit and convenience. Further, the work of land readjustment is steadily progressing in various quarters, and generally with conspicuous success; and the number of primary schools with permanent buildings now reaches 116. Also, arrangements for proper disposal of dirt and rubbish have not been



neglected; and the perfecting of social works, the construction of hospitals and asylums, the establishment of a fish market and a retail market, which latter is, however, not yet finished, and so on,—all these have each had due share of attention from the City authorities. We must not forget the work of repairing damage caused to the City water-supply arrangements and the various improvements introduced into the system of the City electric tramways. All these enterprises have been carried out within the scope of the great Reconstruction Plans.

## VIII

The Reconstruction Plans thus brought into being at last were as you are aware, principally applied to those districts destroyed by fire, while those which had luckily escaped this cruel fate were mostly left neglected. To be more concrete, the road running straight from the front of the Shinagawa railway station as far as to Shimbashi bridge,—both sides of which had fortunately escaped destruction by the flames,—came within the limits of the Reconstruction scheme. But this is only one of the rare examples in the districts not devastated by the conflagration. As to the sections consumed by fire, first let us refer to roads and streets. In pre-Earthquake days, for instance, many roads and streets were so narrow that they were practically closed to automobiles, only main thoroughfares being available for the purpose. The inconvenience experienced on this score was of course not at all slight; especially was this the case at the time of fires, for example. But now after completion of the Reconstruction, the resulting fine network of roads and streets constitutes a prominent feature of those districts, and now this high-speed means of conveyance find easy access anywhere and everywhere. Thus, a great many roads and ways have been newly created in consequence of Reconstruction. Now, to draw comparison between the days before and after the Earthquake Disaster, the total area of the roads and streets throughout the entire City, prior to the disaster, occupied only 12 percent of the total area of the City. However, now—speaking only of districts where the projects contemplated in the Reconstruction Plans have been completed—the total amount of the area occupied by roads and ways is said to exceed 28 percent. This explains, of course, the creation or existence of so many roads and streets at the present time. No wonder, indeed, that the presence of so many automobiles—the number of those officially registered is said to be over 20,000—does not constitute any appreciable hindrance to ordinary traffic in the streets, and that they can find free and easy play without so frequently causing accidents, even though they are speeding in all directions, day and night. In pre-Earthquake

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days, such a large number of automobiles would have meant the preclusion of ordinary traffic in the streets, and foot-passengers would have found themselves constantly in the same predicament as those under the notorious sword of Damocles. Besides, in the down-town districts where the projects contemplated in the Reconstruction Plans have been fully executed, the present condition of public roads and ways, of canals and creeks, and the arrangements for elementary education and other public utilities, are not yet at all worthy of the proud City of Tokyo, which is preeminently able to bear comparison, in all respects, with similar cities in Europe and America. It is, therefore, entirely incumbent upon the municipal authorities, in close co-operation with you citizens, to utilize to the utmost those various arrangements thus realized and completed, and derive from them as much benefit as we can.

These public arrangements thus accomplished, as the result of the Reconstruction Work may be safely pronounced generally perfect and quite efficient, as compared with those of any other cities or towns in the world. Only it must be borne in mind that, as I have just stated the work has been executed chiefly in those districts which fell victims to the flames, while the places which have come out of the faery ordeal whole and sound, are still uncared for and neglected,—a phenomenon likely to draw reasonable reproach from the public as being unfair and partial. For instance, while the down-town districts now stand fairly well equipped with “civilized” social arrangements, the up-town sections of the City are still left in the same old state as in the pre-quake days, with the same inconveniences yet unrectified. But it would require a sum of two or three thousand million, even if calculated on the safe side, to attempt the improvement of roads or to introduce the convenience of City water-supply, in those so-called “hilly” districts. Thus, it is that there is, indeed, a great work still awaiting attention, but the great deterrent is the lack of funds. Be that as it may, we cannot, of course, let this state of things long remain as it is now, considering that it forms an integral part of our great Metropolis, the Imperial Capital, and the proud centre of politics, economy, and culture of our Empire. Therefore, it is our duty and responsibility that these up-town quarters, too, should be gradually subjected to a similar process of improvement, as time goes, on and with plans matured and perfected, as we have already done in those districts decimated by the Earthquake. This would necessarily involve, as I have already hinted, an enormous expenditure of money; and so we are still unable to formulate any plans. At any rate, we should hereafter devote ample thought and study to this grave problem; and, while utilizing, or rather, enabling the whole arrangements already achieved to display their full extent of utility, we should, at the same time, apply our attention and energy to the task of ameliorating those parts of the City which are, as was repeatedly said, still

left unheeded, unrestored, unreclaimed, so that the two portions will form together one perfect worthy whole comprising the magnificent City of Tokyo.

## IX

After all, the "ceremony celebrating completion of the Reconstruction of the Capital," or the "achievement of the work of reconstructing the Capital," signifies nothing more nor less than the fact that the Capital has been restored, at any rate, to its former condition, externally and architecturally; and, therefore, the event should be solemnized, in a fitting manner, as it means the achievement of the projected work after an expenditure of much money, and much energy and thought. In other words, what we understand by the "Work of Reconstruction of the Capital" has been limited, in actual scope, only to the work of making roads and ways, cutting canals, rebuilding elementary schools, or any other construction work in material or concrete form. And the work originally contemplated and projected in the plans is now only approaching completion; and the more important problem to us in future is how we should derive full benefit from the arrangements thus realized; and, especially, how to make our beloved City prove worthy of its position as the centre of the Empire, both spiritually and economically. So, it is, above all things, essential that our City, which has hitherto been the undisputed national centre of politics, economy, and culture, shall still continue long to occupy the same proud position unchanged and unchallenged. This is really what we should all hereafter strive to achieve as our prime goal and aim. But we must never rest content with what we have so far accomplished; true, there still remain a large number of engineering undertakings to be attempted; for with only the arrangements completed up to now, we are unable to affirm confidently that the City can long remain as the centre of the whole Empire. As I said at the outset, the reinforcement of the people's spirit, or the spiritual regeneration of the nation, is undoubtedly very important. On this point, I am rather inclined to feel somewhat diffident, when we compare the present inhabitants of the City with the people at the time of the great national disaster of 1923, and reflect how the citizens of Tokyo, on the whole, have changed in the meantime, in their mental attitude and spiritual discipline. Surely we should hereafter pay particular attention to this special point and should devise, to the best of our power, ways and means for inspiring our people. As I have repeatedly stated, the work of reconstructing Tokyo, as the seat of the Imperial House, was the subject of special solicitude to the Imperial Family; and all the people of the Empire likewise showed themselves deeply interested in this enterprise, so much so that they were unceasing in their manifestation of sympathy and help in a sub-

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stantial way. These facts, indeed, go to show that the City of Tokyo should ever be prepared to prove itself worthy of being looked up to as the spiritual centre of the whole country, guiding the whole nation in the path of progress and prosperity. This is, I think, nothing but the proper duty and responsibility of the citizens of Tokyo. In concluding this address, already too long, I beg leave to reiterate, with particular emphasis that hereafter we should all aim, as our ultimate object, at spiritual rejuvenation and economic regeneration, and, with the combined efforts of all concerned, as we have done in the work of Reconstruction, should march on, with firm step, in the path of spiritual and economic reconstruction, which is nothing but properly discharging the duty and obligation we owe to our fellow countrymen throughout the land. Let us, therefore, one and all, join effort and energy in perfect response to this our grave responsibility. On this happy occasion of the completion of the Reconstruction enterprise, I have stated any humble thoughts and ideas, as one of those who have been allowed to play some part in the great undertaking which has been thus admirably brought to a successful end.

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# APPENDIX



# Seismometrical Study of the Great Kwanto Earthquake of September 1st, 1923

By S. I. KUNITOMI

## I. INTRODUCTION

The great Kwanto earthquake of September 1, 1923, has been investigated by many authorities from various point of view. But there has yet been no study utilized all the seismometrical data recorded at the meteorological observatories of this country. We have about 130 meteorological observatories; and 96 of them are equipped with suitable seismographs. Those observatories which are in direct connection with the Central Meteorological Observatory, Tokyo, sent copies of the seismograms of the above mentioned earthquake to the latter observatory, together with the seismometrical data. The present study of the great earthquake is based on the seismometrical data of all the observatories. A precise examination of these seismograms has been done by the author himself.

As the purpose of the present study is confined to data of the great Kwanto earthquake, it is concerned neither with the disaster that occurred nor with the true cause of the earthquake. The present study, therefore, contains only a determination of the most probable epicentre, depth of seismic focus, mechanism of the beginning of the earthquake and the depth of so-called the Mohorovicic layer near the epicentre.

As to the position of epicentre and the depth of seismic focus of the present earthquake, several authorities have presented the results of their studies. But unfortunately there are considerable discrepancies between the positions or depths determined by different authors. It is probable that these discrepancies may be due to a deficiency of satisfactory data. But some of these reports give tolerably good result; so that it is very interesting to discuss these results, together with the present writers study.

## II. DETERMINATION OF THE EPICENTRE

### (I) Epicentre determined by various authorities

(i) Prof. Imamura determined the epicentre only by seismometrical observations made at the seismological station of the Imperial university, Tokyo. He studied the seismograms very minutely and obtained 9.8 seconds as the

duration of the preliminary tremor  $t = (PS)$  and got the hypocentral distance  $x$  by his own formula  $x = 7.44t$ . Besides these  $t$  and  $x$  he determined an emergent angle  $e$  from the first impulse of a vertical seismograph. The position of the epicentre thus obtained from  $x$ ,  $t$  and  $e$  is about 40 km. North Ooshima Island ( $139^{\circ}25'$  E,  $35^{\circ}07'$  N). According to his opinion, this was followed by three successive shocks.

(ii) Prof. S. Nakamura studied the seismograms of some of the meteorological observatories and determined the directions of the initial motions at these observatories. The converging point of these directions of initial motion he placed in the neighbourhood of Hatano on the coast of Sagami Bay, taking this place as the epicentre. This position agrees with that determined by Prof. Matuyama and the present writer.

(iii) The position of the epicentre determined by Prof. M. Matuyama by the same method as that of Prof. S. Nakamura, differs a little from that of the former and is situated in the neighbourhood of Koozu on the coast of Sagami Bay.

(iv) Dr. K. Siratori determined the epicentre only by observation at Tohoku Imperial University, Sendai, about 380 km. from the epicentre. He obtained the duration of  $PS(t)$  as 47.5 seconds, and determined the hypocentral distance  $x$  from the formula  $x = 8.07t$ . Besides  $x$  and  $t$ , with the direction of initial motion ( $S\ 18^{\circ}\ W$ ) and emergent angle ( $e = 7^{\circ}9'$ ), he determined the position of the epicentre. The epicentre he found lies at about 35 km. to the south of Zyogasima Island ( $\lambda = 139^{\circ}36'$  E,  $\phi = 34^{\circ}52'$  N).

(v) Dr. K. Suda determined the hypocentral distance  $x$  and emergent angle  $e$  from observation at Mera, Kumagaya, Tyosi and Tokyo by using Omori's formula  $x = 7.42t$  where  $t$  is the duration of the preliminary tremor. From  $x$ ,  $e$ , and directions of initial impulse  $P$ , he determined the position of the epicentre in the middle of Sagami Bay.

(vi) Mr. R. Hirano determined the hypocentral distances  $x$ , putting the durations of preliminary tremor  $t$  observed at the various Meteorological Observatories into Omori's formula  $x = 7.42t$ . His epicentre is situated 4 km. to the East of Lake Kawaguti ( $\lambda = 138^{\circ}48'7''$  E,  $\phi = 35^{\circ}30'$  N) which differs extraordinarily from the epicentres determined by other authorities.

(vii) Dr. T. Matuzawa located the epicentre at the mouth of the River Samami ( $\lambda = 139^{\circ}20'$  E,  $\phi = 35^{\circ}16'$  N) where he has drawn the hodograph of this earthquake. According to him, this epicentre agrees well with that determined from the duration of  $PS$  observed at the Tokyo Imperial University.

Thus the epicentres determined by the above mentioned authorities reveal tolerable discrepancies as to position, except those of Nakamura, Matuyama

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and Matuzawa. In Fig. 1, these positions are shown by crosses in which *I*, *M*, *N*, *S*, *R*, *H*, and *T* are those of Imamura, Matuyama, Nakamura, Suda, Siratori, Hirano and Matuzawa.

## (II) Epicentre determined by the present Writer

To determine the position of the epicentre, the author has used isochronal lines, iso-*PS* lines and directions of initial motion drawn from data observed at 68 meteorological observatories in Japan. Among those materials, duration of *PS* and direction of initial motion are obtained from copies of seismograms carefully taken by the author himself. Table 1 contains a summary of the results of seismometrical observations of the earthquake.

Table I. Seismometrical Results of the Great Kwantō Earthquake

Name of Observatory	Time of Occurrence P			Seismic Intensity	Nature of motion	Duration of <i>PS</i> (Sec.) s	Duration of <i>P<math>\bar{P}</math></i> (Sec.) s	Epicentral Distance (km) km
	h	m	s					
Asio . . . . .	58	00.0		4	Slow	—	—	143
Numadu . . . . .		38.5		5	Sudden	7.3	—	56
Yokosuka . . . . .		40.0		6	Sudden	4.0	—	40
Maebasi . . . . .		42.2		4	Slow	14.3	—	125
Kohu . . . . .		43.0		6	Sudden	7.0	—	75
Tokyo . . . . .		4.46		6	Moderate	8.8	—	70
Kumagaya . . . . .		46.4		6	—	10.4	—	100
Tukubasan . . . . .		53.0		4	Slow	—	—	135
Mito . . . . .		56.0		4	Slow	20.8	2.9	169
Nagano . . . . .		56.0		5	Sudden	—	3.3	179
Tyosi . . . . .		56.8		5	Moderate	19.2	2.2	154
Nagoya . . . . .	59	02.0		3	—	22.5	5.1	209
Takayama . . . . .		03.0		3	Moderate	36.0	4.3	201
Matumoto . . . . .		04.0		4	Slow	17.4	2.8	154
Tokusima . . . . .		10.0		4	Moderate	54.0	—	437
Husiki . . . . .		10.0		4	—	28.0	—	256
Takada . . . . .		10.6		3	Moderate	34.4	—	220
Tu . . . . .		10.7		3	Sudden	—	7.5	252
Hikone . . . . .		13.5		4	Slow	—	7.1	268
Niigata . . . . .		14.0		3	Slow	—	8.9	278
Yagi . . . . .		20.7		3	Slow	39.0	10.1	318
Kumamoto . . . . .		23.0		—	—	130.0	—	816
Oosaka . . . . .		24.0		4	Slow	51.0	10.3	345
Kobe . . . . .		27.5		—	—	—	12.2	370
Isinomaki . . . . .		30.0		3	Sudden	—	13.7	398

# THE RECONSTRUCTION OF TOKYO

Name of Observatory	Time of Occurrence P			Seismic Intensity	Nature of motion	Duration of PS (Sec.)	Duration of PP (Sec.)	Epicentral Distance (km)
	h	m	s			s	s	km
Kyoto . . . . .			32.5	2	Slow	80.0	9.5	318
Toyooka . . . . .			33.6	2	—	—	—	396
Yamagata . . . . .			39.0	2	Moderate	55.0	11.1	342
Miyadu . . . . .			41.0	5	Sudden	—	—	372
Tadotu . . . . .			42.0	1	Slow	—	—	503
Nemuro . . . . .			49.0	—	—	—	—	319
Hirosima . . . . .			52.1	2	Slow	76.1	—	616
Okayama . . . . .			54.9	2	Slow	61.6	17.0	481
Kanazawa . . . . .			56.0	3	Slow	—	—	294
Matuyama . . . . .	11	59	58.4	3	Slow	77.5	—	603
Wakayama . . . . .	12	00	02.0	3	Slow	—	12.5	383
Hamada . . . . .			06.8	1	—	—	—	840
Akita . . . . .			10.0	2	Slow	—	16.8	495
Naze . . . . .			11.0	—	—	158.0	—	207
Hakodate . . . . .			13.0	2	Slow	99.0	—	733
Titijima . . . . .			20.2	—	—	104.3	—	960
Simonoseki . . . . .			22.0	—	—	100.0	—	755
Hukuoka . . . . .			22.0	—	—	102.0	—	810
Ooita . . . . .			23.9	—	—	100.1	—	723
Kure . . . . .			27.0	—	—	85.0	—	608
Saga . . . . .			29.9	—	—	116.2	—	833
Nagasaki . . . . .			30.0	—	—	123.0	—	889
Kusiro . . . . .			33.0	—	—	115.0	—	987
Kagosima . . . . .			36.0	—	—	121.0	—	887
Ituhara . . . . .			41.3	—	—	129.1	—	896
Hatidyozima . . . . .			44.0	3	Slow	38.0	—	329
Obihiro . . . . .	01	00	00.0	—	—	—	—	911
Naha . . . . .			—	—	—	185.3	—	1450
Ootomari . . . . .			20.0	—	—	—	—	1305
Miyazaki . . . . .			21.8	—	—	87.2	—	798
Isigakizima . . . . .			40.0	—	—	188.0	—	1895
Dairen . . . . .			49.0	—	—	163.0	—	1577
Taihoku . . . . .			49.0	—	—	209.0	—	2012
Kosyun . . . . .	02	24	3	—	—	185.7	—	2288
Taito . . . . .	03	13	0	—	—	210.0	—	2204
Taicyu . . . . .			13.8	—	—	209.4	—	2133
Hoko . . . . .			30.8	—	—	235.0	—	2272

# APPENDIX

Name of Observatory	Time of Occurrence P			Seismic Intensity	Nature of motion	Duration of <i>PS</i> (Sec.) s	Duration of <i>PP</i> (Sec.) s	Epicentra Distance (km) km
	h	m	s					
Tainan . . . . .			39.0	—	—	262.0	—	2256
Gihu . . . . .			—	—	—	26.4	5.7	222
Uwazima . . . . .			—	—	—	—	21.8	655

In this table, *PS* is estimated by the author himself, and seismic intensity is expressed in the Japanese scale which corresponds to Cancani's scale in the following way:

Cancani's Scale . . . .	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Japanese Scale . . . .	0		1		2		3		4	5	6	

## (i) By isochronals

The isochronals lines are drawn so as to fit the point having equal time of *P* on the map. It is clear that the center of such an isochronals is the epicentre.

Fig. 1, isochronals are shown by chain line. The centre of elliptical isochronals is situated in the neighbourhood of Hatano ( $\lambda = 139^{\circ}13'$  E,  $\phi = 35^{\circ}23'$  N) and coincides with the epicentre located by Prof. Nakamura.

As to the elliptical shape of the isochronals the author considers that it is due to the anisotropic nature of the earth crust. In this country, the isochronals of almost all the earthquakes which occur on the Pacific coast have an elliptical form, having their major axes in the directions perpendicular to the arc of the Main Island. The present earthquake, therefore, gives a typical example of the above mentioned fact.

## (ii) By iso-*PS* lines

As already stated, almost all the values of *PS* shown in Table I, have been examined by the author himself from the seismograms of various observatories. Prof. Imamura and Dr. Matsuzawa obtained 9.8 seconds for the duration of *PS* observed at Tokyo. In fact the value of *PS* at Tokyo is very important in the present study, so that the author made a careful examination of seismograms and obtained 8.8 second for value, allowing for a correction due to the curvature of registration.

From these values of *PS*, the iso-*PS* line having the duration of 10 seconds, *PS* is drawn as shown by dotted line in Fig. 1. The centre of this closed iso-*PS* line gives the epicentre of the earthquake. It is situated in the neighbourhood of Hiratuka near the mouth of the River Sagami ( $\lambda = 139^{\circ}20'$  N,  $\phi = 35^{\circ}20'$  N). The shape of this iso-*PS* line shows an elliptical form, as in the case of the isochronals. This is due also to the anisotropic nature of the earth crust



## THE RECONSTRUCTION OF TOKYO

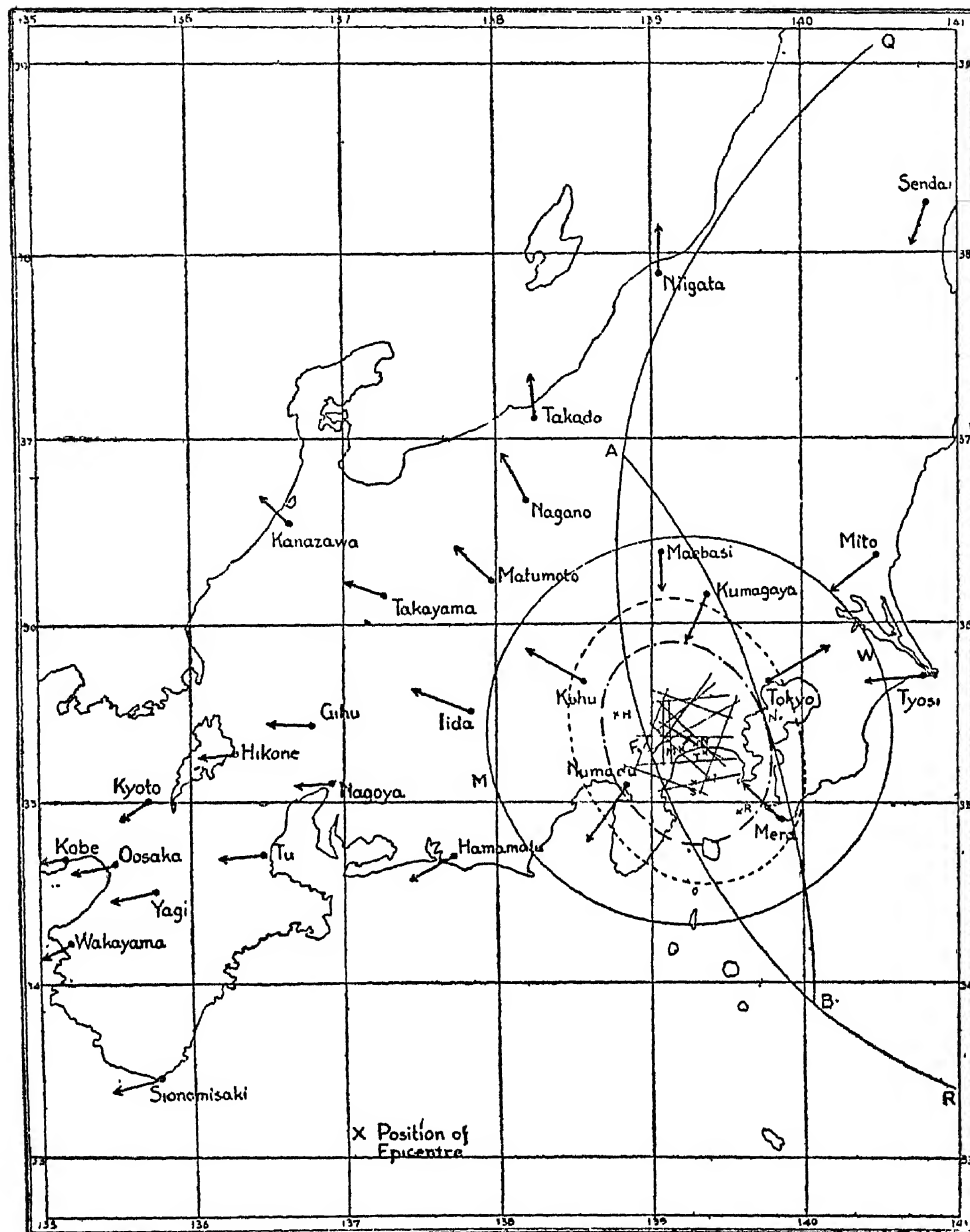


Fig. 1    - - - - - Isochronous line of  $11^h58^m40^s$  J.S.T.  
           · · · · · Iso-PS line of 10 Seconds.  
           ← Direction of initial Motion.  
           X Position of epicentre.

### (iii) The direction of the first $P$ impulse

Generally the direction of the first impulse gives the direction to the hypocentre. Accordingly, it is possible to determine the position of the epicentre if we produce this direction of initial motion drawn on a map, by using a sufficient number of data obtained at observatories surrounding with epicentre. Table II contains a summary of the observations of the direction of the initial motion by some authorities. It is clearly seen in this table that the good

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coincidence is obtained if there appears a sharp impulse of  $P$ , but not in case of very faint impulse.

The extensions of the direction of initial motion do not converge in a point; but we can find a certain area in which those lines closed up. The centre of the area, taken as the epicentre, is situated in the neighbourhood of Kaname ( $\lambda = 139^{\circ}18' E$ ,  $\phi = 35^{\circ}22' N$ ). This epicentre agrees well with those determined by Prof. Matuyama and Nakamura by the same method.

Table II. The direction of initial motion observed by some authorities

Observatories	Authorities						
	Suda	Nakamura	Imamura	Matuyama	Report from observatory	Kunitomi	Hayata
Taihoku .....	N 15°W	N 20°W	N 45°W	—	N 15°W	N 12°W	N 3°W
Isigakizima .....	—	—	—	—	N 80°E	—	—
Naha .....	W	—	—	—	—	—	—
Naze .....	W	—	—	—	—	—	—
Kagosima .....	S 6°W	—	—	—	—	S 9°W	S 16°W
Kumamoto .....	S 76°W	—	—	—	S 40°W	—	—
Nagasaki .....	S 9°W	—	—	—	—	—	—
Hukuoka .....	W	—	—	—	—	W	S 86°W
Ooita .....	W	—	—	—	N 69°W	—	—
Simonoseki .....	—	—	—	—	W	—	—
Hirosima .....	S 25°W	—	—	—	S 25°W	—	—
Uwazima .....	—	—	—	—	—	S 77°W	S 79°W
Matuyama .....	S 64°W	NW	—	—	N 63°W	—	—
Okayama .....	N 62°E	N 90°W	—	—	—	N 50°W	N 37°W
Kobe .....	S 58°W	S 1°W	—	—	S 60°W	S 86°W	S 87°W
Oosaka .....	—	N 83°W	—	—	S 82°W	S 78°W	S 80°W
Wakayama .....	N 50°E	S 56°W	S 56°W	—	—	S 60°W	S 60°W
Sionomisaki .....	SW	N 79°W	S 56°W	—	—	S 56°W	—
Tu .....	S 72°W	N 75°W	S 73°W	—	S 73°W	S 73°W	S 74°W
Nagoya .....	S 73°W	S 83°W	S 84°W	S 83°W	—	S 83°W	S 84°W
Hamamatsu .....	S 58°W	S 60°W	S 60°W	S 65°W	S 52°W	S 62°W	S 59°W
Numadu .....	W	S 35°E	S 56°E	—	S 45°W	S 27°W	S 34°W
Tokyo .....	—	N 37°E	N 26°E	N 42°E	NE	—	N 57°E
Titizima .....	—	N 14°W	—	—	N 9°W	N 13°W	N 37°W
Mera .....	—	N 25°W	W	N 45°W	—	N 45°W	N 45°E

# THE RECONSTRUCTION OF TOKYO

Observatories	Authorities						
	Suda	Nakamura	Imamura	Matuyama	Report from observatory	Kunitomi	Hayata
Tyosi.....	S 81°W	S 82°W	S 83°W	S 80°W	S 66°W	S 82°W	S 83°W
Mito .....	N 38°E	S 13°W	S 17°W	—	N 37°E	S 50°W	S 27°W
Miyako .....	N 16°E	—	—	—	—	S 75°W	S 77°W
Yagi .....	—	S 77°W	S 77°W	—	S 76°W	S 75°W	S 77°W
Kyoto.....	S 55°W	—	—	—	S 79°W	—	—
Hikone .....	S 83°W	S 83°W	S 83°W	—	S 82°W	S 83°W	S 83°W
Gihu .....	N 57°W	N 86°W	W	N 86°W	—	N 88°W	N 87°W
Takayama .....	S 68°E	N 66°W	S 67°E	—	S 71°E	N 69°W	N 69°W
Kohu .....	—	N 80°W	N 73°W	—	N 85°W	N 75°W	N 58°W
Matumoto.....	S 42°W	N 43°W	N 42°W	N 41°W	N 42°W	N 50°W	N 45°W
Nagano .....	N 21°W	N 25°W	N 26°W	N 30°W	N 26°W	N 27°W	N 27°W
Maebasi.....	S	S 45°E	S 3°E	S 3°E	S 1°E	S 1°W	S 1°E
Kumagaya .....	S 22°W	S 23°W	S 23°W	S 23°E	S 23°W	S 23°W	—
Sendai .....	S 21°W	—	N 18°E	—	S 18°W	S 18°W	S 18°W
Hamada .....	W	—	—	—	—	—	—
Kanazawa.....	N 75°W	NW	N 45°W	—	N 76°E	N 45°W	—
Takada.....	N 76°W	N 7°W	N 5°W	—	N 3°W	N 13°W	N 4°W
Niigata .....	N 21°W	N 7°W	N 6°W	—	N 22°W	N	—
Akita .....	—	N 23°E	N 18°W	—	N 27°E	—	N 39°E
Hakodate .....	N 21°E	N 12°E	—	—	N 20°E	—	N 21°E
Ootomari .....	N	N 16°W	—	—	N	N 10°W	N 13°E

Thus the epicentres of the great Kwantō earthquake determined by the author from the isochronals, iso-*PS* lines and directions of initial motion are satisfactorily coincide. The greatest discrepancy in the observed epicentres does not exceed 10 kilometres. As the lines joining these observed epicentres form a triangle, we may take the point equidistant from the vertices as the most probable epicentre of the earthquake. Thus, the neighbourhood of Kamiame ( $\lambda = 139^{\circ}17' \text{ E}$ ,  $\phi = 35^{\circ}22' \text{ N}$ ) is the epicentre of the earthquake.

It is worth calling attention to the fact the above mentioned epicentre is obtained only from observation of the first impulse. This is the vertical projection of a crustal mass on the earth's surface, which moves with the first motion of the earthquake. Therefore, this epicentre may have no apparent connection with the centre of the great diastrophism revealed in the bed of Sagami Bay.

## III. DETERMINATION OF THE DEPTH OF SEISMIC FOCUS

## (1) Depth of seismic focus determined by several authorities

Depth of seismic focus has been determined by many authorities but their numerical values are tolerably different.

(i) Prof. Imamura used the magnitude of initial impulse observed at Hongo, Tokyo. Thus he determined the dip of the seismic focus at Tokyo as  $\tan^{-1} a/b$ , where  $a$  is the magnitude of horizontal initial impulse, and  $b$  denotes that of one half of the vertical one. With this value of the dip and the hypocentral distance obtained from the duration of preliminary tremor, he determined the depth of focus as 15 km.

(ii) Prof. S. Nakamura determined the depth by using the Hypocentral distance observed at Tokyo and the position of epicentre. Thus the depth estimated by him is as deep as 66 km. But it seems that his observed value of duration of preliminary tremor at Tokyo is larger than that of the others by 3 seconds. This error of duration of  $PS$  may give the larger value to the depth of the seismic focus.

(iii) Dr. K. Siratori determined the depth by the same method as Prof. Imamura, using the value observed at Sendai, about 380 km. apart from the epicentre. The value of the depth of focus thus obtained is 44 km., but it may have a less accuracy owing to the greater epicentral distance of the observing station.

(iv) Mr. R. Hirano drew circles which have hypocentral distances as their radio and corresponding stations as their centres. The intersection of those gives the seismic focus. The depth of focus thus obtained is 40 km.

(v) Dr. K. Suda determined the depth by the same method as Prof. Imamura and Nakamura, using the data observed at Kumagaya, Tyosï, Mera and Tokyo. Thus he obtained 48 km. as the depth of focus.

(vi) Dr. T. Matuzawa thought the seismic focus was situated at a depth of 40 km., on account of the mechanism of the generating  $P$  wave.

(vii) Prof. M. Matuyama made an approximate determination of the depth of focus by a method different from those of the others.

He assumed a rectilinear propagation of the seismic wave; then

$$h = \frac{d^2 - v^2 T^2}{2vT}$$

where  $h$  is the depth of focus, the epicentral distance,  $T$  the surface transit time and the velocity of propagation near the surface. Using the data observed at Kumagaya, Tyosi, Mito, Nagano, Nagoya and Hikone, he obtained 30 km. as the mean depth of seismic focus, with correction of curvilinear path of

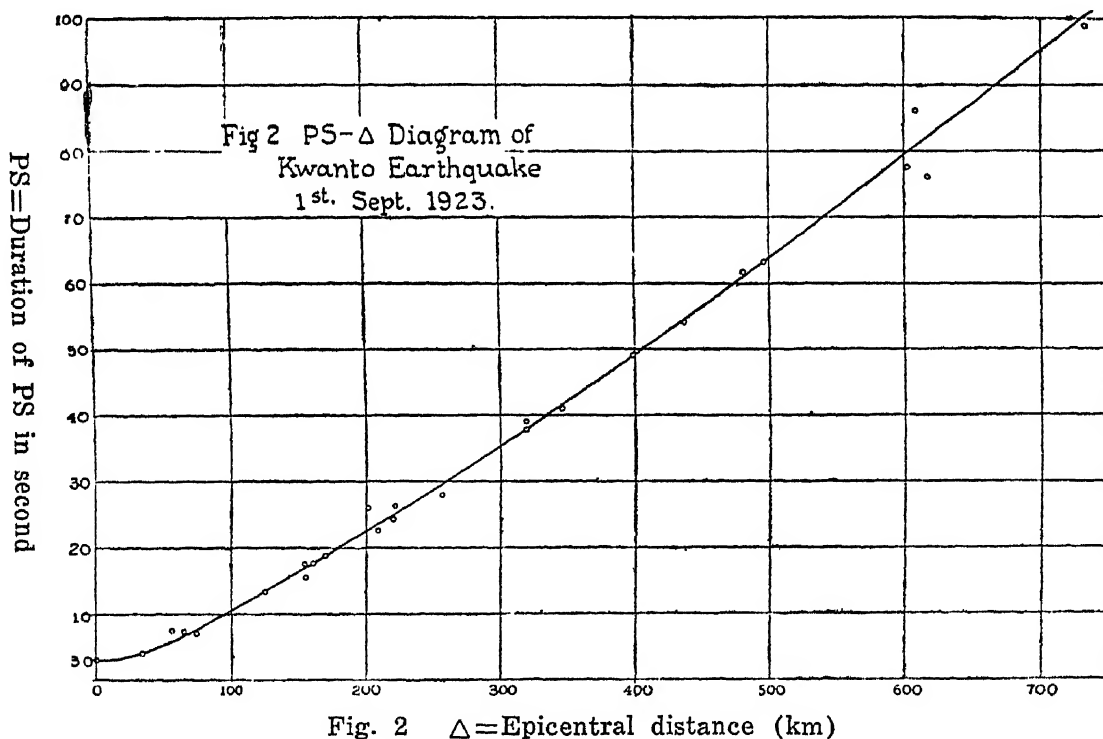
seismic wave. This value of the depth of seismic focus satisfactorily agrees with that obtained by the present author as stated later.

(II) Depth of Focus determined by the writer

The determination of seismic focus, using emergent angles and hypocentral distances which are determined by a linear formula such as  $\Delta = kt$ , may be erroneous if there are only a few observational materials, for  $k$  is not only a function of the depth of focus, but it depends upon the geological nature and construction of the upper layer of the earth crust. To avoid such uncertainty of determination, the author adopted the following three methods, each of which requires a number of observational materials.

(i) By the  $\Delta - PS$  diagram

$\Delta - PS$  diagram is drawn taking the durations of preliminary tremor  $PS$ , which are seen on Table I as ordinate and corresponding epicentral distances as abscissa of a rectangular coordinate system. Fig. 2 is the  $\Delta - PS$  diagram of the great Kwantō earthquake, drawn as mentioned above. Almost all the values



of  $PS$  were determined by the author himself, from copies of seismograms. The epicentral distances used in drawing this diagram are measured from the epicentre are determined by the iso- $PS$  lines.

Thus the  $\Delta - PS$  curve fitting each point on the diagram is a single curve, as shown on Fig. 2. The intersection of this curve with the axis of ordinate is 3.0 seconds, which is the value of  $PS$  at the epicentre. If we denote this

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quantity by  $\tau_0$ , then the depth of focus is obtained by the following formula:

$$h = \frac{v_1 v_2 \tau_0}{v_2 - v_1}$$

where  $V_1$  and  $V_2$  are the velocities of longitudinal and transverse waves in the upper layer of the earth crust respectively. Accordingly, we assume  $v_1 = 5.56$  km. sec.  $v_2 = 3.5$  km. sec. as determined by several authors, then the depth of focus is obtained as  $h = 28$  km.

(ii) By the inflection circle

Existence of the mohorovicic layer under the Sagami district is confirmed by a seismometrical study of the great Kwantō earthquake.

The duration  $\bar{P}$ - $P$  are determined by the author from copies of seismograms tabulated in Table II. If we take the corresponding duration of  $\bar{P}$ - $P$  above the hodograph of  $\bar{P}$ , and draw a curve fitting those points, then we have the hodograph of  $P$  as shown in Fig. 3. The intersection of the  $P$  and  $\bar{P}$  hodograph is a point where  $P$  and  $\bar{P}$ -wave arrive at same time; its epicentral distance is 115 km. in the present case.

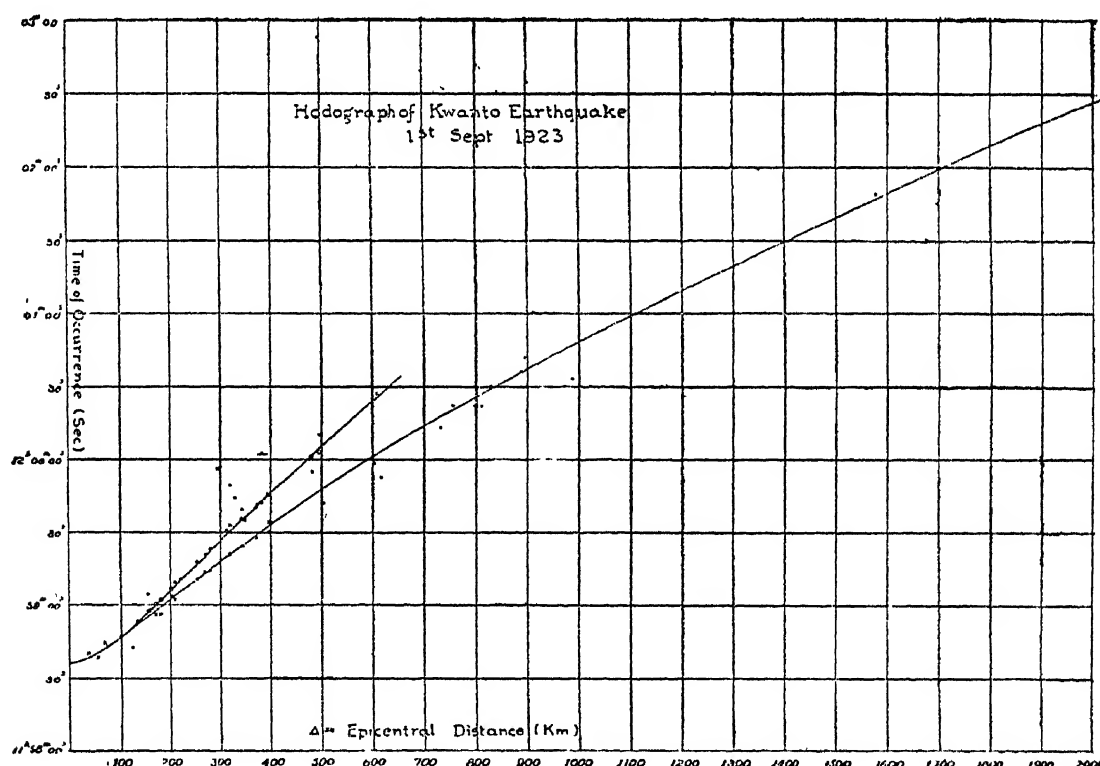


Fig. 3

Now the depth of the mohorovicic layer in our country is determined by several authorities in vlaues as follow:

# THE RECONSTRUCTION OF TOKYO

Name of earthquake	Depth of Mohorovicic layer	Depth of focus	Authority
North Tazima earthquake, 23rd May 1925 .....	42 km.	33 km.	K. Wadachi
Tokyo earthquake, 3rd August, 1926..	42	40	K. Sagisaka
North Tango earthquake, 7th March, 1927 .....	45	14	S. I. Kunitomi
Middle Etigo earthquake, 27th October, 1927 .....	34	8	S. I. Kunitomi
R. Midori earthquake, 22nd August, 1928 .....	36	30	K. Hayata
Mt. Omure earthquake, 27th July, 1929	44	23	K. Hayata
Hanno earthquake, 23rd March, 1928.	48.4	48	T. Hirano

Thus the mean depth of the Mohorovicic layer underneath of the earth crust of our country is 42 km. Now at the point of inflection,  $P$  and  $\bar{P}$  arrive at the same time, so that the following relation is deduced:

$$\sqrt{d_0^2 + h^2} = (2d - h) \cos \alpha + d_0 \sin \alpha$$

where  $d_0$  is epicentral distance inflection point,  $h$  the depth of focus,  $d$  the depth of Mohorovicic layer and  $\alpha$  is given by the relation  $\sin \alpha = v_1/v_2$  and means the limiting angle of total reflection of longitudinal wave at the Mohorovicic layer. If we put the value of  $d_0$  and  $\alpha$  in the above formula, then we have:

$$h = 31 \text{ km.}$$

## (III) By the minor radius of iso- $PS$ ellipse

As in the author's previous paper,<sup>(1)</sup> the iso- $PS$  line of an earthquake which occurred in our country shows an elliptical form, as in the case of isochronous lines, and a length of the minor axis of a certain iso- $PS$  line may be a function of the depth of focus. The author found a close relation between the length of the minor axis of 10 seconds iso- $PS$  line and the depth of focus in shallow earthquakes whose foci lie at the depth of less than 40 km. If the length of a minor axis of 10 seconds iso- $PS$  ellipse be km., then the depth of its hypocentre will be determined in km. by the following relation:

$$h = 97 - 1.04b$$

Now the minor radius of 10 seconds iso- $PS$  line measured from Fig. 1 is 67 km., so that we have 27 km. as the depth of Hypocentre.

Accordingly, we obtain 28, 31 and 27 km. respectively as the depth of

(1) Gerland Bertaäge zur Geophysik, Helt. 1, Bd. XVII, 1927.



seismic focus of the great Kwanto earthquake, by the above three methods. The mean value is 28 km. and we may adopt this value as the required depth.

#### (IV) Mechanism of generating the earthquake

Table II is the direction of initial motion measured from copies of seismograms of each observatory by the several authorities. The accuracy of the value is very good; for some of these values measured by the different authorities agree satisfactorily. Fig. 1 shows the distribution of the direction of initial motion.

Dr. S. Nakamura explained this distribution on his paper; but there are large contradictions upon the depth of focus and the radius of the nodal circle, in his paper.

The present author, therefore, explained this complex distribution of the direction of initial motion by considering the Mohorovicic layer. In Fig. 4 A,  $OO$  denotes the surface of the earth, and  $UU$  the Mohorovicic layer whose depth is assumed to be 42 km., and the layer between  $OO$  and  $UU$  is considered to be uniform and isotropic. If the seismic longitudinal wave which propagates from the hypocentre  $H$ , incidents to  $UU$ , it refracts and goes into the second layer, when the incident angle is less than the limiting angle of total reflection.

In the present case, the limiting angle of total reflection  $\alpha_0$  is given by the relation:

$$\sin \alpha_0 = \frac{v_1}{v_2}$$

and its value is  $47^\circ 31'$ .

Consider a normal fault at  $H$  as seen in Fig. A, and let  $FF_0$  is fault surface and  $x$  the hade.  $NN_0$  is a normal to the fault surface at  $H$ , so that the seismic longitudinal ray propagates in this direction and give the minimum displacement. Thus the intersection of  $NN_0$  to the surface of the earth gives the nodal line. If we consider such normal fault as seen in Fig. 4 A, the direction of initial motion of  $P$  separates into condensational and rarefactional lines in each quadrant which is divided by fault surface and nodal plane. Namely at  $F_0HN_0$  and  $FHN$  quadrant, the initial wave is rarefactional and at  $N_0HF$  and  $F_0HN$  quadrant is is condensational.

Now let the head  $\alpha$  be  $48^\circ$ , the distribution of the direction of initial motion is given by Fig. 4 B, where  $E$  devnotes the epicentre,  $XN'Y$  and  $AN_0B$  are both the nodal line,  $W, M$  the inflection circle and  $QAF_0BR$  is the fault line. Such a supposed distribution of directions of initial motion agrees entirely with the real distribution of those given by Fig. 1 or Table II. Accordingly, the mechanism of the generation of the great Kwanto earthquake is a normal fault as given by Fig. 4 A.

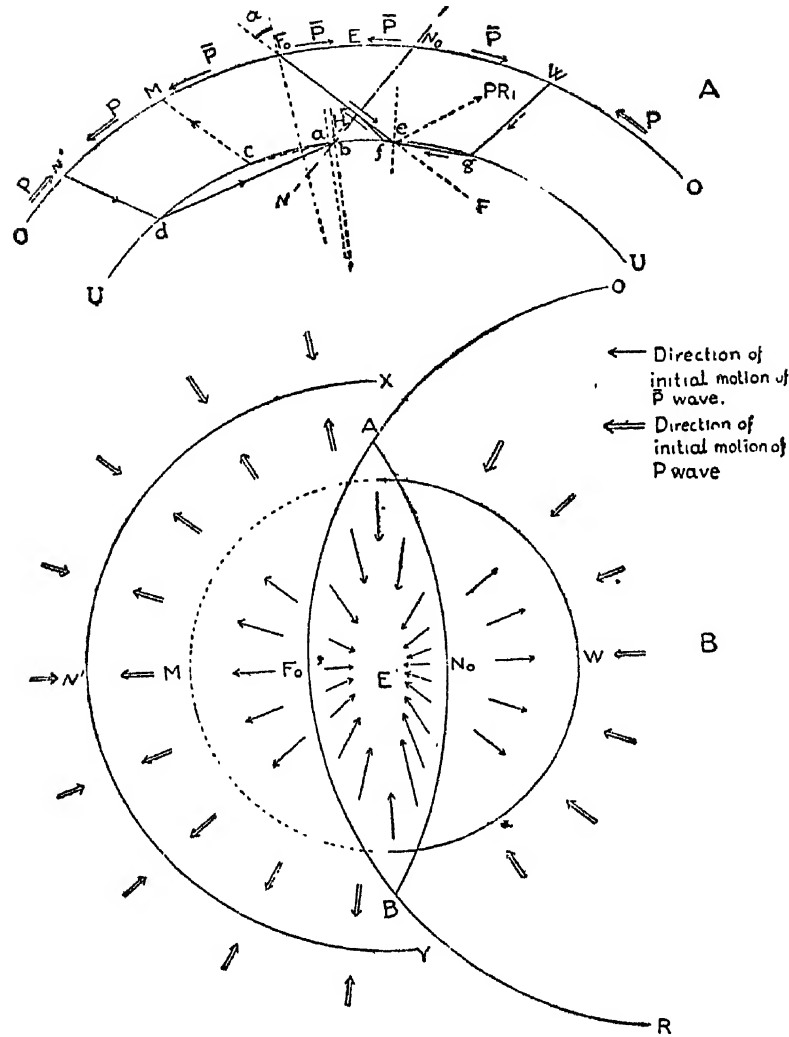


Fig. 4

Prof. B. Koto found a distinct fault line which runs South-westward through Nebukawa. The fault line is no other than that determined in the direction of initial motion by the present author, and given in  $AF_0B$ , Fig. 1.

#### (V) Depth of Mohorovicic layer

From the depth of focus  $h$  and the epicentral distance of inflection circle  $d_0$ , we may determine the depth of the Mohorovicic layer from the equation:

$$\sqrt{d_0^2 + h^2} = (2d - h) \cos \alpha + d_0 \sin \alpha$$

If we put the observed value of  $h$ ,  $d_0$  and calculated value of  $\alpha_0 = 47^\circ 31'$  into the above formula, then we have

$$d = 39 \text{ km.}$$

The accuracy of the above formula is given by

$$\frac{\partial h}{\partial d} = \frac{h}{2 \cos \alpha \sqrt{d^2 + h^2}} + \frac{1}{2}$$

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and the possible error of  $d$  is only 1 km., if there exists an error of 1 km. in  $h$ . Therefore, the above formula is satisfactorily accurate for the determination of the depth of the Mohorovicic layer.

The time of occurrence at the epicentre or hypocentre is determined by the hodograph shown in Fig. 3, and their values are 11h 58m 26s and 11h 58m 31s J. S. T. respectively.

In conclusion, the author expresses his heartily thanks to Prof. Dr. T. Okada director of the Central Meteorological Observatory, Tokyo, for his kind advise, and to the directors of the meteorological stations of this country for courtesy in placing their valuable data of observations at this disposal in preparing the present report.

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# Great Conflagration after the Destructive Earthquake of 1923 in Tokyo

Address of Professor S. Nakamura, of the Imperial University, given at the  
Pan-Pacific Club Luncheon on Friday, February 29th, 1924

Excellencies, and gentlemen! It is a great honour for me to be invited to speak before such an enlightened society as the Pan-Pacific Club. I thank you all heartily for the kind favor in giving me such opportunity as this. When first asked by Count Hayashi whether I was willing to accept the invitation to speak upon the great conflagration of last September, I hesitated very much to accept it, because I knew too well that my poor knowledge of foreign languages might not be able to convey to the hearers clearly what I wanted to communicate, and after all, my endeavour might end in wasting their precious time. But at last I accepted, for I had a great and earnest wish to see the rebirth of our beloved city of Tokyo, revived in its full splendor, giving at the same time a comfortable home to ourselves and an agreeable halting place to foreign visitors.

We had seen elsewhere several examples of the reconstruction of a city not so ideally carried out as they wished, the design of a great master of city planning-work being curtailed by some political or economical reason, to the painful regret of future generations. My sincere wish is not to repeat such unhappy examples this time, and an enlightened and powerful society such as yours may be instrumental in helping the people engaged in the reconstruction work to carry out their plans as ideally perfect as possible, so that our posterity may, at some future time, look back to us with a feeling of gratitude for our having left to them a rich and valuable legacy.

The facts which we have collected regarding the great fire may, I hope, convince you of the importance of several plans like public gardens, boulevards, canals and tanks for mitigating fearful damages due to a great fire, and that conviction may serve to call your kind help to the beneficial revival of Tokyo. This is the reason why I accepted the proposal and determined to venture to speak before you.

There are many calamities which befall us—an earthquake, a fire, a flood, a swinder, a thief and so on. Of them all I think the worst is a fire. When we are visited by a thief, we lose something, but the thief himself gets some benefit by the deed. It is quite otherwise with a fire, for then we lose something to the gain of nobody else. The damage caused by the last great earthquake in Tokyo was not so formidable as either in Kamakura or on the Miura

peninsula. According to official reports, the number of damaged houses was 7,143 in Kamakura-gun with a loss of 600 lives. We had, therefore one loss of life for every ten damaged houses in these severely shaken districts. In passing I must add that luckily there was no fire there. Now what happened in Tokyo? Here we had a loss of 290,000 houses by the fire, and a loss of 16,000 houses damaged by the earthquake with a loss of 74,000 lives. Supposing for a while that the earthquake in Tokyo was just as strong as in Kamakura and Miura, and allowing a loss of one life for every ten houses let us reckon a loss of 1,600 souls due to the earthquake in places without fire, then we had a loss of 72,400 lives due to the fire, with a rate of one loss of life for every four burned houses.

By these estimations you may easily see how dreadful is a fire. A fire destroys not only our substantial properties, but by it those precious products of our brain contained in books, embodied in paintings and sculptures, are completely lost never to be recovered. One must also consider that against an earthquake we are almost powerless for we have no means to control the destructive force, the only thing that we can do being to minimize our losses by constructing strong houses and proper engineering works. But with a fire it is quite otherwise, for we can directly confront the force of fire, and prevent it if we please. It is certainly a foolish thing not to study carefully the behaviors of a fire so as to have the means beforehand of preventing it for the sake of our welfare.

Now a fire caused by an earthquake has several peculiarities not to be seen in common conflagrations, but unluckily its study has been utterly neglected. Our Department of Education organized a body called "Earthquake Investigation Committee" soon after the destructive Mino-Owari earthquake of 1891, to investigate the earthquake itself scientifically, and also to study the means to minimize its effects as much as possible. The Committee has published in several reports its results of study, issued many admonitions to the public how to build earthquake-proof houses. It has repeatedly warned the authorities of the non-ability of waterworks for extinguishing a fire attending an earthquake, though without due response. But it has neglected to study the characteristics of an earthquake-fire and also to investigate how to build houses which are earthquake-proof and fire-proof at the same time. The last catastrophe has warned the Committee to take up the investigation seriously and study the conflagration as minutely as possible, and I was ordered to undertake the task. Now I have but a little knowledge of fire or fire prevention work. As a professor of experimental physics, and of course an amateur in these problems, I remained in perplexity for a while how to begin. Students of physics in the University of Tokyo have volunteered to help me in the task, and after con-

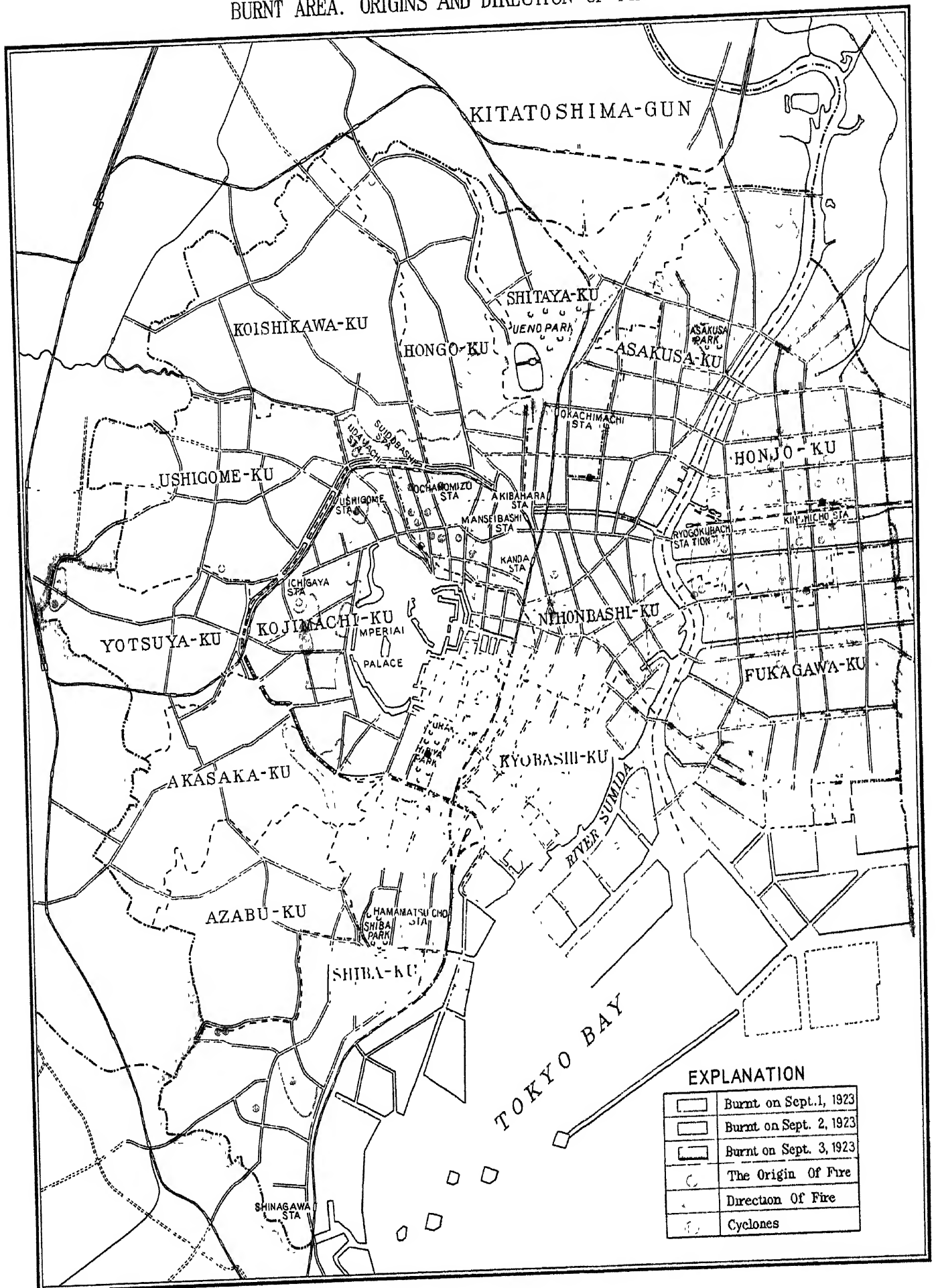
sult' with them, we came to the conclusion that we should proceed to investigate the following two points as our principal objectives.

The first point is to find out the course of the fire currents over the devastated region, that is to examine how a flame spread from its origin and came to be extinguished. The second point is to find out the forms of the "fire front" at several instants of time. By the term "fire front," I mean to designate a curve, the points lying on which were set on fire at the same time. If we draw a system of fire-fronts for every hour (or for every two hours), we could thereby see at a glance how fast the flame has spread itself. If you cut across the stem of a tree you have what is called annular rings, a system of nearly circular curves, by which you can tell the speed of growth of woody substance in several directions. A fire front in the case of a fire corresponds to an annular ring in a tree. The idea is taken from analogies which we have in physics. For studying the motion of electricity in a conductor, we seek stream lines and equipotential lines: and for studying the motion of heat, we want to find stream lines and isothermal lines. Thus the investigation of a conflagration was reduced to a problem of physics, as everybody is apt to do in such cases to treat a matter according to his professional methodic.

When the principle of our investigation was once fixed, we set about the work in visiting places in the devastated area. We asked the people there engaged in bringing the ruins to order, the two following questions—(1) "From what direction did the flame come?" and (2) "When did it consume your house?" This part of our work, though it seems to be very simple apparently, was found to be not so simple a job. When I approached a sufferer and asked him the question "When was your house burnt?" I was met by a suspicious look and was asked whether I belonged to some fire insurance company. I experienced the same thing many times. I thought over the question and came to the conclusion that in such uneasy conditions of mind one could not expect to get a faithful reply, so I refrained myself from going and asking the people and remained at home. It was very lucky for me that I was assisted by our students. When they approached somebody, with memo and map in hand, and asked them the same question, the people looked at their uniforms with gold buttons and their square caps, and asked them whether they were engaged in investigations of the fire. Upon their simply reply of "yes" the people then went on to speak quite frankly of what they knew. Some people told us just what we asked, remarking and apologizing at the same time, that in those dreadful moments they almost lost their sense of time and space. After some time of meditation and reflection they gave us their answer. Generally speaking, those people gave us valuable material for further elaboration. But there were some who were every garrulous and pointing at

# BURNT AREA. ORIGINS AND DIRECTION OF FIRE

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the ruins of some distant building assured us that the fire, which destroyed their houses, has originated at that building and that the fire raged first in this direction and then in that direction, and so on, almost bewildering us by their talk. It so happens that such reports were generally of small value, for when they were subsequently examined they were found to contain some proportions of doubtful matter. What they told us was usually a well organized system of a succession of events; it being what they had experienced themselves and what they had heard from somebody else, woven well together to present a seemingly beautiful appearance. Now you will understand that what a scientist wants is a collection of faithfully reported facts but not an assemblage of individual theories. He wishes to work these materials with keen judgment and then frame them into a theory or an hypothesis. His theory may seem sometimes very extravagant to others, but he is willing to take the whole responsibility of the theory himself. Therefore, guarding ourselves against such deception, though well meant on the part of the people, we went on collecting the materials. It has cost us a work of 250 days for a man. Then the reports were registered on a map of Tokyo in a scale of 1/3000. The two systems of curves, fire currents and fire fronts were drawn and the result is the map which you see here hanging before your eyes.

In this map the fire currents are drawn in red and the fire fronts in green. The fire currents radiate from centres of fire and end in places where the flame either stopped spontaneously or was artificially prevented from spreading. There are two kinds of centres of fire, which we shall distinguish as primary and secondary centres. By a primary centre or simply a centre we mean the point where the fire broke out of itself, chiefly as the direct effect of the earthquake, and it is represented by a red circle on the map. Besides these primary centres, there are numerous secondary centres or subcentres where the blaze was caused by sparks or burning cinders projected from fires at some distance, carried over yet unburned houses by the force of the wind. A subcentre is represented by a red triangle. Of course, green curves of fire fronts encircled these centres and cut the fire currents in general obliquely, in contrast with the electric currents and the equipotential lines which, as you know, cut each other always perpendicularly.

It is awfully difficult to know the exact number of these primary and secondary centres. At the earlier stages of our inquiry, people were marvelously willing to tell the positions of the centres. But as the days went by, they evaded our question under some pretext or other. I cannot make out this peculiar change of attitude on the part of the sufferers, perhaps the reason might have been this: At first they had same predominating sense of antipathy against the inhabitants on a centre, attributing their loss of property to their careless-

ness, but gradually their minds became calmer, and then the sense of neighborliness made them reticent about entering into conversations which might bring about troublesome consequences. The authorities of the Metropolitan Police and the fire brigade complained to me also on this point, telling me that they could not get any trustworthy information at all when they visited the sufferers, if they wore their uniforms. So far as our inquiry goes up to now, we have about 80 centres and 150 subcentres, that is in total 230 centres, which were effective in reducing the city to ashes. According to the investigation of the fire brigade, the total number of centres amounts to 275. There are besides these more than 40 centres successfully extinguished as soon as the fires broke out.

Let us now consider the characteristics peculiar to fires attending an earthquake, dividing them for the sake of convenience into four topics:

1. Origin of fire,
2. Growth of fire,
3. Prevention,
4. Psychology of sufferers.

Let us take up these topics in the order given.

### ORIGIN OF FIRE

The first characteristic falling under this head is the fact that a tremendous number of independent fires break out practically at the same time, causing great confusion in the minds of the people and making fire prevention almost impossible. The number of fires which broke out during the thirty minutes after the earthquake amounted to 120.

The second characteristic is the nature of the causes of fire. In common conflagrations, the cause is usually some accident of a fire-place or of an electric current. There is a kind of cause of fire peculiar to earthquake-fire, that is due to some chemicals. There are some substances which begin to be inflamed when they come in contact with atmospheric air like phosphorus, or with moisture as sodium and potassium. When the bottles containing these chemicals, in schools, laboratories and drugstores were thrown off the shelves of a cupboard, or the latter itself fell down, then a fire necessarily ensued. In our Imperial University alone we had many such cases. It will be interesting to you, I think, if I tell you that there were some twelve cases of such fires, which caused serious damage, but at the same time we had about an equal number of such fires successfully extinguished as soon as they broke out. Now contrast this with fire due to another cause. We had about 30 cases of fire which started from restaurants, both European and Chinese, "Tenpuraya," beef-houses, and

so on. This is quite natural as it was just meal time when the earthquake took place. Fires from these 30 centres all grew up and spread wider, with only 3 cases successfully extinguished. This great difference in the proportion of fires extinguished and those not extinguished in these two categories may be due perhaps to the difference in the nature of the buildings and of the qualities of their floors. But the chief cause of this difference, I think, must be sought in the sort of people present there, that is to say, people with or without culture, or say people with or without an idea of responsibility. We heard of many heroic deeds in schools and laboratories where even servants at the risk of their lives strove for the prevention of fire. In passing I may add that there were only a few cases of fires due to electricity and also almost none in public bath-houses.

The third peculiarity is the geographical distribution of the centres. You see here clearly in the map, that we have many centres in Jinbocho and in Sensoku-machi and their vicinities. Here the centres are so densely crowded together that the fire currents look on the map like sparks from children's fireworks, which we see on the streets in summer evenings. Now it so happens that these areas with a great density of fire centres are newly reclaimed land, the ground being very loose and consequently badly shaken. It is also well worth noticing that these quarters are usually thickly covered with poor houses, with many miserable restaurants, a fact easily explained from economical considerations. One can almost tell the nature of the ground from the density of fire centres.

### GROWTH OF FIRE

As to the growth of a conflagration, we have again many peculiarities. The first point is that a fireproof building in a normal condition or in a common fire, loses that property by an earthquake. An ideal structure must be fire-proof and at the same time quake-proof. The majority of cases in which a building has lost its safety against fire was due to the falling down of tiles from the roof leaving the latter at the mercy of the approaching fire. And much mischief was done by the fracture of gables in stone and brick houses, exposing the wooden frame work under the roof to the action of fire.

The second point which must not be overlooked in a great fire, is the enormous heat. The temperatures must have surpassed a thousand degrees in many places, iron frames being bent as if they were made of wax, or huge blocks of granite being miserably cracked and falling off in scales. We are fully convinced by this fire that a crustal line stone like granite is a bad building material. In such intense heat, every combustible substance facing toward a burning flame reaches, by its thermal radiation, to so high a temperature as

to be nearly equal to the flushing point, so that a minute spark coming in contact causes it to blaze up almost with explosion. They say that the Imperial Theatre caught fire as there was a wooden part in the familiar gilded image of a dancing old man on its roof. The fire which raged over the north-western corner of Shiba district was due to sparkes from the girls' school in Toranomom caught by a wooden frame-work for drying washed linen on the roof of a private house in Akefunecho.

Even in places protected against the radiant heat, the air temperature got unbearably high. At the Central Meteorological Observatory near Hitotsu-bashi, the maximum air temperature recorded during the fire reached 46°C. or 155° F. The thermometer used for that purpose was hung within a Stevenson box, which is a box made of wood, louvered all around so as to protect the thermometer from raidant heat, and at the same time to secure a free circulation of air.

Thus it is absolutely necessary not to have any combustible material on a roof in the future. I wish to point out here, that a high structure like the Honganji Temple or the so-called "buildings" after the American fashion, is easily caught by sparks and becomes a subcentre of fire, and then its height is favorable to the growth of fire by spreading sparks all around to great distances. The subcentres in Tsukishima on the Sumida river were ascribed to sparks from the Honganji temple coming over the river. The fact that the fire which swept over the business quarters of Nihonbashi and Kyobashi occupies such a wonderfully wide area may be explained also by the existence of high and massive buildings, for when a building is massive, there are evidently plenty of combustible materials, which cause the fire to reach to a tremendously high temperature, and when a building is high, its form is favorable by chimney action to excite an upward local wind to give fresh air to the fire and to scatter sparks far and near. Such high and massive buildings therefore must be fire-proof and quake-proof in a degree proportionate with their height and mass.

One more factor which needs our consideration, is that when a building is high, it is exposed very much to the radiant heat from distant fires, though the neighboring low structures are protected from it. The result is, that when an area is occupied by buildings of nearly equal height, the roofs must be fireproof, but the walls may be less fire-proof, while high buildings projecting themselves from the surrounding level must have their walls absolutely fire-proof. You see many high buildings, as the First Fire Insurance Co. near Kyobashi, catching fire in the upper stories while the lower stories remain perfectly intact. The windows of those high bulidings must be made fire-proof by wired glass at least, and better still by iron shutters.

## APPENDIX

### PREVENTION

Now let us consider the third topic, namely, how a fire is prevented from spreading. I shall distinguish between two cases, artificial and natural. Of the artificial methods of fire prevention, the most common one is to use water supplied from the municipal water-works and to use gasoline pumps. In ordinary fires, this is of course the most powerful and effective means not surpassed by any other, so powerful indeed that common, and I dare say, even the professional people of the fire brigade, have forgotten to consider that there may occur a case when these weapons are useless. The authorities went so far as to persuade the people to destroy wells in their private premises and to throw away those instruments used for mechanical subsidence of a fire. But unluckily the day came when the water pipes were severely damaged by earthquake, the automatic water sprinklers did not work at all. The gentlemen of the fire brigade were ordered to work here with a scanty supply of water from a moat or a pond, and then directed to go to a second place and then to a third, until they were utterly exhausted and the engines to ceased to work. It was rather pitiful to see a fire brigade with their motor pumps, standing quite perplexed near a sheet of water without knowing how to utilize it. Just such was the case when at 4 o'clock on the morning of the 2nd of last September, the fire, after sweeping along the western wall of the English Embassy near Hanzomon, threatened the army hospital from the North, and the fire brigade received a strict order to save the hospital from fire at any cost, because the hospital was already crowded with many wounded victims, and it had to accommodate more sufferers who were expected every moment. Besides, if the hospital caught fire, then the important government buildings of the ordinance Survey, Departments of Army, of Navy, of Law and of Foreign Affairs were endangered. The topography of the ground and the direction of the wind were both very unfavorable to us. Now the hospital stands on a moat encircling the Imperial Palace, but people cannot use the water there because its level is too far below the street. As every schoolboy is taught in his class room, a pump however powerful cannot suck up water more than 33 feet above its free surface, though the pump can force water up to any height if it is powerful enough. What a sad dilemma in the desperate moment! The fire brigade did its best by arranging many engines one after another in a series and got water from ponds in the public garden of Shimizudani on one side, and arranging another series to get water from the moat further down at Sakuradamon on the other, both distant some 800 metres! By their brave fight against the fire the brigade at last succeeded in saving the hospital from fire. It is to be deeply regretted that we have taken no measure beforehand for the utilization of such an immense

quantity of water in an emergency. According to the opinion of an officer of the fire brigade, with whom I have spoken about the matter, the problem can be easily solved if we only had a road for a pump to approach the water, built so firmly, that the ground would not yield under the heavy load of the pump. Then they can approach and recede from the water without any risk of losing their freedom of motion. As you all know, just in front of this hotel there is a water reservoir serving as a lily pond, and you can easily guess how its water saved the hotel and the adjoining buildings from fire. This was built on an advice of the fire brigade and skilfully executed by the architect, when the hotel was rebuilt a few years ago after the fire which consumed it. This is indeed a wise plan and should be adopted everywhere in future. I am emphasizing this point and advising wealthy people, who have extensive gardens with ponds in them, to build a firm road especially designed for the motor pumps to make these waters accessible, and to facilitate their use for the benefit of themselves and also of their neighbors.

There are many instances in which a small supply of water has been effectively utilized for fire prevention. I shall point out a few examples. The advance of fire was stopped near Shokonsha in one corner of Fujimicho by a group of men there assembled utilizing two wells, one under the roof of a "sake" shop nearby, and the other on the street sunk by the city for sprinkling the neighboring streets. In Hashibacho, the sewer water was successfully used to stop the fire.

Of the artificial methods of fire prevention, next to the use of water, there is an effective one of demolishing the houses, before the fire actually reaches them. By this means combustible materials will be made compact and consequently the free access of fresh air would be rendered more difficult than when the buildings would be standing. The consequence is that even if the destroyed building be set aflame, the energy of the will not become very great, and it could be easily extinguished. We formerly used tools of destruction for this purpose, namely firehook firefok, etc., for pulling houses and buildings down. With the introduction of steam and gasoline pumps, these tools were made obsolete, and at present the method of destruction itself is almost forgotten. When, however, we do not have an available supply of water as in the last fire, we must have recourse to this method. We found in several places policemen, soldiers, and the public engaged in this work of mechanical subsidence of fire, with marked success. Let me cite a few instances of these cases. At Yumicho, two policemen guided and directed people to destroy a house and the fire was stopped to spread there. A Young Men's Association were actively engaged in this work at Shintanimachi, military men on the reserve list saved a part of Hongo-Sanchome, and so on. Of these innu-



merable examples, the work of demolition carried out on a large scale was that executed near Kurumazaka. Here the head officer of the police station at Sakamoto commanded in person a body of policemen, and without any other tools than a large saw and some ropes, undertook the task. They first cut the pillars of houses near the bases and then attached to them ropes by which they pulled the houses down. The officer forced any people who were standing idly looking on the work to help to pull the ropes. How vast an area of Negishi was saved from fire by this act of demolition! From these examples it will be seen that it is a wise plan in future to keep such tools of mechanical destruction in some prescribed places ready for use in case of emergency.

I have divided the methods of fire prevention into two categories, artificial and natural. Now let us consider the latter case. By the natural way, I mean the cases in which a fire is stopped spontaneously (a) owing to the absence of combustible substances or (b) to the presence of some kind of barrier to it. These barriers may be again either artificial or natural such as a tree, a river, a canal, a street, an overhead railroad, a fire-proof houses, a stone or brick wall, and so on. To this category may be added (c) the change of direction of wind. There are undeniable evidences to show that a canal or a street was effective to stop a fire current. You see in this map that the devastated area may be divided into many smaller subareas occupied by mutually independent systems of fires. Boundaries of these areas are represented by yellow lines, which form a number of compartments or cells with a centre or subcentres of fire within each of them. These yellow lines run in many cases along a street, a canal, an overhead railway, etc., showing us that these barriers played important parts in determining boundaries of fire. When I say that the presence of a street is effective, you may perhaps argue against it, and consider that it was due to the absence of combustible substances. But it seems to me that the correct explanation is not so simple. When a fire approached a river or a street perpendicularly, or in other words, with its fire front parallel to the river (or the street) then the latter was not effective enough to obstruct the march of fire. But when the fire current happened to be much inclined to the direction of a river, the fire current was gradually so deflected as to flow finally parallel to it, and the flame did not cross over it. This peculiar action of a river or a street of deflecting a fire current is perhaps due to local winds flowing along it, as the fresh air is sucked in, to supply the vertical air current excited just at the fire front. Whatever the correct explanation may be, the fact remains that sometimes such barriers were effective to fix the boundary of the fire. Overhead railroads lines were also effective, as you see in Kanda or Shiba.

The fact that an isolated tree or better still an avenue of trees prevents a fire from spreading, is known to everybody. The kinds of trees most suited

for fire prevention are oak (*Quercus Acuta*), pasania (*Pasania cuspidate*), "sangoju" (*Vibutnum odoratissimim*) and others. These are all evergreen trees. Though not an evergreen tree, ginkgo tree is also widely known among us for its fire protecting property. There are many traditions about buddhistic temples saved from fire by dragon's spouting water from a ginkgo tree nearby, on which he lived hidden from the human eyes. Perhaps this is the reason why we see in many temples gigantic and stately ginkgo trees standing close to them, and spreading their branches over them. In the last fire, we had many cases in which a tree was effective to save a building from fire, though there were also many cases in which it was useless. An example of the former case will be found in Harukicho, Hongo, where a kind of campher trees (*Machlus Thunbergii*) saved an old two storied house from fire: an example of the latter case is furnished by "Taiseiden," a temple dedicated to Confucius, which was reduced to ashes though it has stood amid many oak and pasania trees. Trees are effective obstacles against a fire only when the latter is not very strong, or when their fire preventing propety is helped by other means.

As to the winds, the anemometer record at the Central Meteorological Observatory shows us that it was rather stormy on that day. At noon, just at the moment of the severe shock, we had SSE winds with a speed of 15 metres per second. The speed remained pretty constant but the direction changed very much until 5 o'clock p.m., fluctuating between SSE and SW. By this fluctuation the fire front seems to have been made much wider. From 5 o'clock the winds changed its direction steadily turning over W toward N, when at 10 o'clock it assumed the direction NNW with a speed of 20 metres per second. At midnight it reached its maximum speed of 22 metres, then the speed decreased, but generally speaking the winds remained to blow from N until about 8 o'clock next morning, when the winds changed to S and remained moderate, blowing a few metres per second. This strong wind did much damage to us, but at many places lying near the boundary the burned and unburned areas we owe much to a lucky change of the direction of winds.

Let us now consider some instances of fire successfully prevented by conjoint actions of natural and artificial means. There is a small area covering Izumicho and Sakumacho which marvellously escaped from damage due both to the earthquake and the fire, looking like an oasis in the desert of Tokyo. They say it is a miracle. But on closer examinations, we see that it is no miracle at all, it was due to happy combination of many favorable factors helping one another. On the northern boundary of the unburned area, we have a row of brick houses, on the opposite side of the street, the Ichimura-za Theatre, the Post Office, the Pharmaceutical Laboratory of Mitsuwa & Co. These buildings served as a fire prevention barrier against the flames coming from the

North. Though they were themselves all set on fire, still the force of the fire was slackened and at last it was extinguished. The northeastern corner of the area is formed by complexes of brick buildings of the Mitsui Charity Hospital and the Hygienic Research Laboratory of the Department of the Interior, all intact. On the eastern side of the area, at first the fire came from the east directly against it, but just at the moment when the fire was about to reach the buildings winds changed and the fire spread towards the south. On the western side, we have an open ground, the Akiha-no-hara cargo depot. A dock within the ground freely communicating with the Kanda River supplied the necessary water to the people; and a line of railway running through the station ground served as a barrier. The southern boundary of the area is formed by the river Kandagawa itself. In addition to these favorable circumstances, the inhabitants there had a firm belief that this part had many times escaped from damages in former conflagrations in Yedo and Tokyo, and they resolved and did their best to fight against the fire. Any available water was used, pump hoses were inserted into gutters and sewers, well water was carried in buckets, and so on.

Another example of an isolated region escaped from fire is the famous temple of Asakusa-Kwannon. They attribute this to the holy favour of the goddess Kwannon, and at present the temple ground is crowded with hosts of believers. A small Shinto temple of Shinmei in Morishitacho was also saved from fire. Both these two buildings are surrounded by big trees, and moreover winds changed its direction at critical moments. On further enquiry it was found that the people did their best in fighting against the fire.

These examples, I think, are sufficient to convince us of the truth of the conclusion that fire can be prevented from spreading if we are only determined enough that it shall not spread. What a pity it is that people so completely lost their presence of mind that in most places they made no effort to control the fire, leaving it to do its work of devastation without any hindrance at all! When we reach this point we must consider the psychology of people during the fire, the fourth topic already mentioned.

### PSYCHOLOGY OF PEOPLE

Under such appalling conditions as in the last severe shock and the great fire which followed it, when the very earth proved treacherous, it is but natural that the people should lose their presence of mind. They are not to be blamed, but at the same time it is to be deeply regretted that they cared only for their own safety and neglected to extinguish the fire. Here I must call your special attention to the fact of the enormous damage that was done by baggage, furni-

ture and other properties which poor refugees carried about with them. They wandered about with heavy burdens on their shoulders not knowing where to go. Some struggled to the east, while others strove to force their way to the west. Loaded vehicles and burdened men jostled each other. Streets and thoroughfares were blockaded by goods and properties. These they deposited on the roads and railroad lines. They caught fire in several places (as in Iidamachi Station), and caused these otherwise effective barriers to lose their fire restricting quality. Fire crossed under the overhead railroad line near Kanda Station, as a vast quantity of goods piled up under the girder caught fire. Those parts of Asakusa lying to the west of the Asakusa temple were mostly covered by graveyards of many Buddhist temples, ordinary houses being rather sparsely scattered. But soon after the shock, these open grounds were completely filled up with refugees' goods which soon were in flames and assisted in the work of destruction.

The most unhappy and sad catastrophe of this sort happened of a tremendous scale at the now notorious ground formerly occupied by the Clothing Department of the Army, in Honjo. This is a piece of quite open ground of 60,000 square metres, and only separated by a street, there is an extensive garden of a wealthy banker Mr. Yasuda, covering an area of about 40,000 square metres. Thus here we had an area of 100,000 square metres or about 250 acres lying just on the eastern bank of the river Sumida. People assembled there from all quarters to save their lives and properties. What a sad fate it was for the people seeking their refuge there, not knowing in the least the calamity impending over them! The whole space was so thickly packed, according to eye-witnesses, with men, women and children and their properties that they found themselves almost unable to move. At 4 o'clock p.m., on the 1st of September, fire approached from three sides, leaving only the side next the river. Suffocating fumes and horrible fires threatened them, sparks falling over them in showers. All at once the people heard some unearthly sound approaching them, the heavens darkened, and they were terror stricken to find that a furious tornado was sweeping toward them, lifting or setting in flames everything before it. When it passed over the grounds, what was left behind? A loss of 24,000 souls!

People engaged in the city planning work at present are preaching about the importance of public gardens, wide streets, etc., as a very effective means for the future security of the people. I also emphasized it a short time ago, but it is necessary here to add some important remarks to the assertion. One may perhaps argue against us and ask, "You had just such an open piece of ground at the site of Hifukusho, people took refuge there and what was the result?" To this I reply that they did not make the proper use of the place,

or rather the place was not adequately equipped. In ordinary days indeed, the ground was quite empty and had presented an appearance of the most ideal place of refuge. What a contradiction it was that just on the critical day, that area was changed into a field full of combustible materials waiting for an approaching fire! You see plainly that in the future, in the design of our public gardens and similar places, we must take this point into consideration and take some measures, to provide with equipments to protect them against the damage likely to be caused by the baggage of the refugees.

I told you about the wonderful escape from fire of the Asakusa-Kwannon. One important cause was left untold. According to what I have heard, the priest of the temple wisely refused admittance to the sufferers, to the temple grounds, if they carried anything with them.

The total number of bridges within the burned area of Tokyo amounted to 349. Of these, only 102 remained intact, and 247 or 80 percent were destroyed. Almost all of these bridges were lost by fire, mostly caused by the goods placed on them. This shows us how important it is to build bridges with non-combustible materials on one hand, and on the other to prohibit people placing any objects on them. This should be regulated by law if necessary.

On the river Sumida, we had within the devastated area five bridges, of which only two were left serviceable to traffic. Let me tell you how one of them, Shin-Ohashi, was saved from fire by the brave unflinching deed of one man, Mr. Hashimoto, the head of a division of policemen in Nishi-Hirano station, Fukagawa. He escaped from his house soon after the earthquake, and wishing to find refuge somewhere came to the east end of the bridge. He found it already crowded with refugees and saw at once the danger. Wishing to save the bridge he ordered the people not to stop on the bridge with their burdens. But as he was clad in plain clothes at the time, his order was of no avail. With a firm determination to save the bridge at any cost, he hastened across the bridge to the opposite bank, and found some policemen in uniform belonging to the Hisamatsu station. He instructed them to barricade the bridge at that end, only admitting passage to unburdened people. Then he took some of the policemen to the east end of the bridge, and with their assistance succeeded in blockading the bridge against burdened refugees, and in clearing it of baggages placed on it. This hard job was done sometimes by throwing baggages over the bridge into the river. His colleagues remonstrated with him against this act of force and reminded him repeatedly lest he might be censured by his superiors and lose his position. He remained inflexible in carrying out what he believed to be his duty. You will perhaps join me in admiring his courage in performing his public duty. His bravery ought to be honored. I heard a very interesting and at the same time a sad episode from the master

of Hisamatsu School. When the bridge was blockaded at the west end, there came a refuge carrying something on his back. On being refused admittance he blamed the policemen vehemently for their unlawful order saying, "Why am I not allowed to pass over a public bridge carrying my own property?" a common way of reasoning among us. Now it seems that he had caught somewhere a spark in his baggage. That embryo of flame at once burst forth in blaze, when a sudden gust of wind swept past him and his opponents. A living image of the fire-god Fudo! He was enveloped in flame, fell down and expired. After this event the order of the policemen was obeyed and the death of the poor victim was not without its lesson. If I may criticize the behaviour and the reasoning of the man, I should like to say that he had learned somewhere to insist on his personal rights, but unfortunately he had not learned his duty as a member of the community and a citizen. I sincerely wish that we were all taught and trained from our boyhood, what to do and what not to do in case of emergency.

Now I think I have abused your favor long enough, it is time to stop. In conclusion let me summarize what I have stated:

1. An earthquake causes more damages than a fire.
2. A fire occurs more frequently than an earthquake.
3. The force of a fire can be checked if we are determined so to do.
4. For the control of fire we must have suitable equipments and several precautions must be taken.
5. People ought to be trained in the proper use of these equipments.

Let me once more repeat my earnest wish to have our beloved city of Tokyo so perfectly remodelled that our posterity will be thankful to us for leaving them a splendid and comfortable place in which to live. And for the execution of this task your great social influence and kind sympathy are sincerely solicited. I thank you.

## APPENDIX

1. As mentioned in the text, the total number of primary centres is 84. If we leave out of considerations those independent centres as in Hibiya Park or in the University ground, but if we reckon those centres as that at the Imperial Forestry Bureau in Kojimachi, which though isolated itself, yet whose sparks excited secondary centres and reduced a greater part of Kanda and Nihonbashi to ashes, we have 72 primary centres which served to transform Tokyo into a vast continuous desert.

2. Fires at these primary centres broke out immediately after the earthquake almost simultaneously, except the following four:

## APPENDIX

Centre	Time
a. Minowa, Asakasa .....	15'
b. Uchisaiwaicho, Kojimachi .....	20'
c. Kanasugi, Shiba .....	0"
d. Kitadaimoncho, Shitaya .....	2"

3. The devastated area may be divided into a number of subareas forming so many independent systems of fires. Each system includes usually one primary centre in it, but in some system we may have two or more centres in it. For example three fires originated at Tamachi, Akasaka amalgamated one another soon after they broke out, and proceeded toward Atagomachi and reached Kanasugi, so that it is appropriate to consider these three fires to form a system. The 72 primary centres before mentioned may, by proper grouping, be considered to form 61 independent systems of fires. The total area covered by these 61 systems is 38,346,000 square metres. The following table gives 12 systems with their areas, which exceeded 1,000,000 square metres.

Fire System	Area
Honkokucho, Honcho, Nihonbashi.....	3,492,000 sq. m.
Kikugawacho, Honjo . . . . .	3,488,000
Hachikwancho, Kyobashi . . . . .	2,616,000
Iriyamachi, Shitaya . . . . .	2,712,000
Tamachi, Akasaka . . . . .	1,899,000
Reiganjima-shiocho, Kyobashi . . . . .	1,870,000
Higher Engineering School, Asakusa.....	1,865,000
Sarugakucho, Kanda . . . . .	1,430,000
Higashi-daikucho, Fukagawa . . . . .	1,425,000
Imperial Forestry Bureau . . . . .	1,195,000
Higashi-rokkenboricho, Fukagawa.....	1,182,000
Monzen-higashinakacho, Fukagawa . . . . .	1,048,000

Thus the first two systems have areas almost one-tenth of the total area.

4. The speed of fire is governed by many factors, like topography of the ground, nature of buildings, and winds. The following table gives some of the quickest and of the slowest speeds.

Place	Speed (metre per second)	Time
Kiba, Fukagawa .....	820	19'–20'
Sendamachi, Fukagawa . . . . .	650	19'–20'
Tsuki-shima . . . . .	500	21'–22'
Takasagocho, Nihonbashi . . . . .	400	20'–21'
Atagocho, Shiba . . . . .	300	0"– 1"
Kamiyoshicho, Asakusa . . . . .	30	6"–16"
Hirakawacho, Kojimachi . . . . .	20	10"–17"
Saruyacho, Asakusa . . . . .	18	16"– 0"













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